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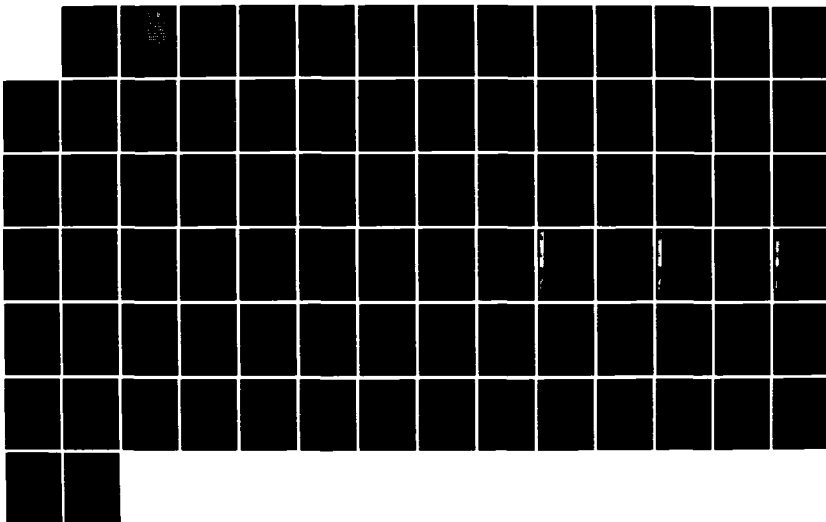
PUBLIC WORKS CENTER PEARL HARBOR FLEET MOORINGS
UNDERWATER INSPECTION PLAN(U) NAVAL FACILITIES
ENGINEERING COMMAND WASHINGTON DC CHESAPEAKE DIV
15 APR 83 CHES/NAVFAF-FPO-1-83(11)

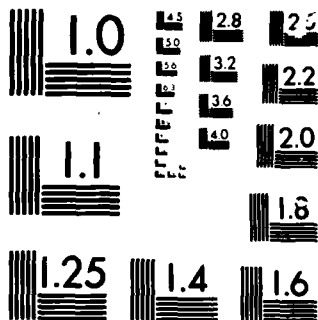
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**PUBLIC WORKS
CENTER
PEARL HARBOR
FLEET MOORINGS
UNDERWATER
INSPECTION
PLAN**

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OCEAN ENGINEERING
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NAVAL FACILITIES ENGINEERING COMMAND
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As part of COMNAVFACENGCOM's Fleet Mooring Maintenance (FMM) Program, CHESNAVFACENGCOM has been assigned the responsibility to conduct the underwater inspections of fleet moorings worldwide. This plan provides guidelines for the underwater inspection of 45 fleet moorings operated and maintained (Con't)

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by the Public Works Center, Pearl Harbor, HI. The inspection is scheduled to take place during the 1-21 may time frame.

CHESNAVFACENGCOM has designated an Engineer-in-Charge (EIC) to provide on-site technical guidance to Underwater Construction Team Two (UCT-2) divers who were tasked by CINCPACFLT message 210331Z August 1982 to perform the underwater portion of the inspection. In addition, the EIC will prepare the post inspection report which will include the results of the inspection and recommendations for required maintenance actions. *Reopen AC*

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PWC PEARL HARBOR **UNDERWATER INSPECTION PLAN**

1.0 BACKGROUND

As part of COMNAVFACENGCOM's Fleet Mooring Maintenance (FMM) Program, CHESNAVFACENGCOM has been assigned the responsibility to conduct the underwater inspections of fleet moorings worldwide. This plan provides guidelines for the underwater inspection of 45 fleet moorings operated and maintained by the Public Works Center, Pearl Harbor, HI. The inspection is scheduled to take place during the 1 - 21 May time frame.

CHESNAVFACENGCOM has designated an Engineer-in-Charge (EIC) to provide on-site technical guidance to Underwater Construction Team Two (UCT-2) divers who were tasked by CINCPACFLT message 210331Z August 1982 to perform the underwater portion of the inspection. In addition, the EIC will prepare the post inspection report which will include the results of the inspection and recommendations for required maintenance actions.

2.0 PROJECT RESPONSIBILITIES

CHESNAVFACENGCOM will develop the FM underwater inspection plan, provide technical assistance to the dive team, prepare the required inspection forms, evaluate the observed inspection data, and report the results of the inspection to interested activities.

UCT-2 will provide sufficient divers to accomplish the inspection within the allotted time frame, gather and accurately report all required data, and ensure that the required amount of diving support material/equipment is available. In addition, UCT-2 divers will perform the underwater inspection in accordance with this plan and collect the data specified in paragraph 4.0.

The activity responsible for the moorings being inspected will provide logistics support as required by the Engineer-in-Charge and the UCT dive team.

3.0 GENERAL MOORING HISTORY

PWC Pearl Harbor currently operates and maintains 45 fleet moorings. The geographical positions of these moorings are shown in Figure 1. Although these moorings have been periodically removed,

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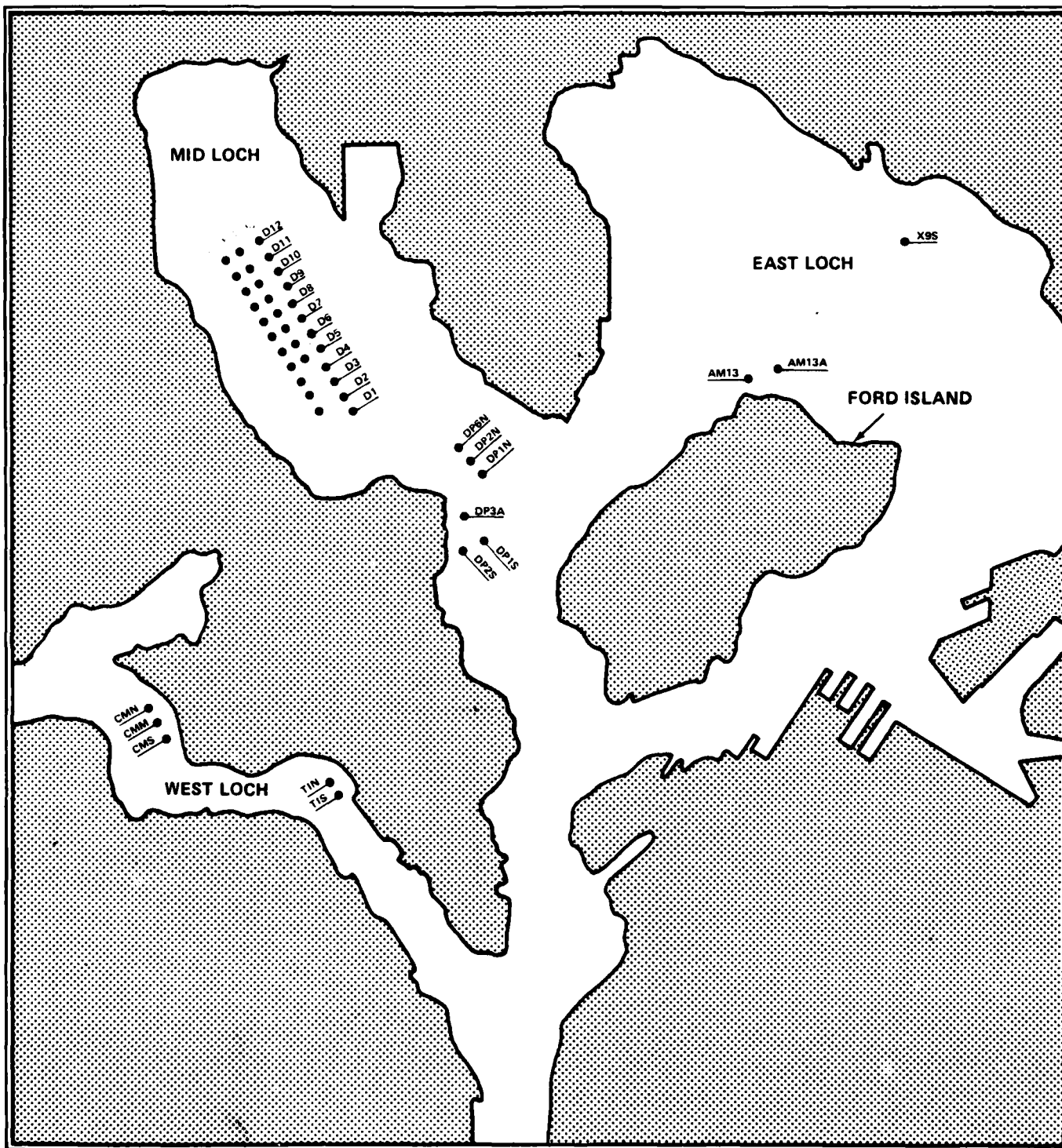


FIGURE 1. PEARL HARBOR FLEET MOORING LOCATION PLAN

inspected, repaired, overhauled, and downgraded as required, they have been in use for 30-35 years and much of the currently utilized mooring material is probably deteriorated and near the wear limit. The last underwater inspection of most of these moorings was conducted in November 1979 by CHESNAVFAC-ENGCOM with the assistance of divers from UCT-2.

The design of the PWC Pearl Harbor mooring systems and their mooring components vastly differ from the standard designs contained in DM-26. For example, the anchors for all of these systems are comprised of concrete clumps, concrete anchors, or combinations of both. In addition, the actual class of most of the moorings, based on results of the 1979 inspection, represents a substantial downgrade from the intended class indicated in PWC Pearl Harbor records (see Table 1). As-built data, schematics, and other historical data concerning these buoys are contained in Annex C.

4.0 INSPECTION PROCEDURES

4.1 Inspection Objectives. The purpose of mooring inspections is to determine the general physical condition of buoys and chain assemblies and, when possible, to verify or update existing as-built and maintenance records. Divers inspect only a portion of the submerged buoy hull and chain assemblies in order to compile a general description of the mooring's condition. The existence of fairly consistent measurements during this inspection provides a good indication of the mooring's overall condition. It should be kept in mind that periodic underwater inspections are intended as an expedient and relatively inexpensive supplement to accurate maintenance records. As such, they cannot fully substitute for a complete inspection involving recovery of the mooring and the measurement and evaluation of each component.

One of the more important parameters used to evaluate the condition of a mooring is chain wire diameter. After cleaning to bare metal, a selective sampling of the wire diameter of chain links and connecting hardware is taken in order to determine the amount of deterioration due to corrosion and wear. "Single Link" measurements are taken where chain is slack, and detect only corrosion loss. "Double Link" measurements, taken where two links connect under tension, detect the combined effects of corrosion and wear. Chain links and other components which measure 90% or greater of original wire diameter are considered to be in "good" condition; a measurement between 80% and 90% of original diameter is considered "fair" condition and is cause for the mooring to be downgraded in classification; any measurement less than 80% is considered "poor" and is cause for the mooring to be declared unsatisfactory for fleet use. Figure A-1 in Annex A depicts the proper method of taking both single and double link measurements.

TABLE 1. PWC PEARL HARBOR FLEET MOORINGS

Mooring No.	Mooring Class ⁽¹⁾ (Designed/Current)	Water Depth (Ft.)	Last Overhaul
AM13	C/D	31	?
AM13A	C/C	38	?
CMN	G/G	39	5/70
CMM	G/G	39	5/70
CMS	G/G	42	5/70
D1M	C/G	34	3/78
D2N	A/D	33	?
D2S	A/G	25	?
D3N	A/G	34	10/75
D3S	(2)	33	?
D4N	A/G	32	3/78
D4S	A/G	22	?
D5N	D/F	37	?
D5M	C/G	24	?
D5S	D/G	24	1/71
D6N	D/D	35	3/78
D6M	C/C	35	?
D6S	D/D	24	?
D7N	D/D	34	8/82
D7M	C/C	29	1/81
D7S	D/D	23	1/81
D8N	D/D	35	1/81
D8M	C/C	34	1/81
D8S	D/D	23	12/82
D9N	A/A	27	12/82
D9M	A/A	20	12/82
D9S	A/A	21	12/82
D10N	A/F	24	9/71
D10M	A/F	24	9/71
D10S	A/F	27	9/71
D11N	A/D	23	5/70
D11M	A/D	27	5/70
D11S	A/D	27	4/68
D12N	A/F	24	2/74
D12M	A/F	26	2/74
D12S	A/F	28	9/71
DP1N	A/A	40	3/82
DP1S	A/A	40	3/82
DP2N	C/C	36	3/82
DP2S	C/C	40	3/82
DP3A	C/F	12	1/72
DP6N	C/C	12	3/82
T1N	C/G	29	1/72
T1S	C/G	28	1/72
X9S	A/A	42	12/82

(1) Lower classification is a result of downgrading after 1979 underwater inspection.

(2) Buoy broke loose from anchorage in 1979 and is currently on shore.

Standard underwater inspection procedures do not call for the inspection of any part of the mooring which is buried. Ground legs and risers are observed only to the point at which they become buried; no attempt is made to locate and inspect anchors or other mooring materials which are not readily visible.

4.2 Buoy. The geographic position of each buoy will be verified. In order to accomplish this, a transit will be used to sight each buoy from known positions ashore.

4.2.1 Buoy Upper Portion. The buoy shall be observed to determine its general condition. The size of the buoy (diameter and height) should be recorded along with its freeboard. Physical damage such as holes, dents, or listing shall be described. If the buoy is fiberglass coated, the fiberglass should be inspected for cracks, wear, peeling, or rust-bleeding. A check will be made to see if the hatches have been fiberglassed over. If the buoy has not been fiberglassed, the paint will be checked for cracking, chipping, and peeling. Hatches, openings, and penetrations will be examined and broken parts and rust will be reported. Inspection check lists are contained in Annex B.

The buoy fenders and rubbing rails shall be checked for integrity and secure connection to the buoy.

Buoy top jewelry shall be identified and measured with calipers to find the overall outside dimensions and areas of most severe reduction in wire size. Methods for presetting calipers are contained in Annex A.

4.2.2 Buoy Lower Portion. Divers shall thoroughly inspect the buoy below the waterline. The thickness of marine growth shall be recorded, three one-foot-square areas shall be selected and cleared of growth without damaging the paint or fiberglass, and the condition of the paint or fiberglass will be noted. If the buoy is a riser-type with a hawse pipe, the presence and condition of the rubbing casting shall be recorded. If the buoy is cathodically protected, the condition, dimensions, and connection of anodes are to be noted. Then, electrical potential readings are to be taken with an underwater voltmeter at three locations on the buoy bottom.

4.2.3 Bottom Jewelry. On each mooring, the jewelry connecting the buoy to the riser shall be identified and measured with calipers. As with the topside jewelry, the overall dimensions and the smallest wire size of each type of link or shackle will be recorded.

4.3 Riser. Three consecutive double link measurements using pre-cut gauges will be made at both ends and near the center of the riser. Procedures for the use of pre-cut gauges are also contained in Annex A. The swivel and detachable links contained within the riser assembly shall be visually inspected and measured. As the divers swim down the riser, all chain links and other mooring hardware will be visually observed. Material suspected to be in worn or damaged condition will be investigated.

4.4 Ground Legs. Three consecutive double link measurements of each ground leg shall be taken at both ends and near the center of the visible portion of each ground leg. If the visible portion is longer than 90 feet, measurements shall be made every 45 feet. In those cases where the ground leg chain is slack and not in tension, three single link measurements shall be taken of each selected link as shown in Figure A-1 (Annex A). All connecting hardware including detachable links, anchor joining links, pear links, end links, swivels and shackles shall be identified and measured with calipers. Worn hardware and unusual chain joining practices shall be recorded and photographed.

The legs shall be labeled A, B, C, etc., clockwise from magnetic north and their orientation (determined by the diver's compass) sketched as in Figure 2.

4.5 Anchors. If an anchor is located, a pop float shall be attached to it so that the relative positions of the anchor from the mooring buoy can be observed from the surface. The anchor's position shall be recorded. The hardware connecting an anchor to its ground leg will be measured by calipers and the wire diameters recorded.

4.6 Photography

4.6.1 Topside. Topside photography and ashore photographs are the responsibility of the Engineer-in-Charge.

Photographs will be taken of each buoy showing its general condition. Photographs of the topside jewelry and damaged buoy components will be taken as deemed appropriate by the EIC.

Photographs will be taken of ashore spare mooring material inventories and construction equipment as deemed necessary.

4.6.2 Underwater. Underwater photography shall be the responsibility of the dive team. Buoy bottoms, bottom jewelry, worn links, swivels, ground rings, and other hardware shall be photographed wherever

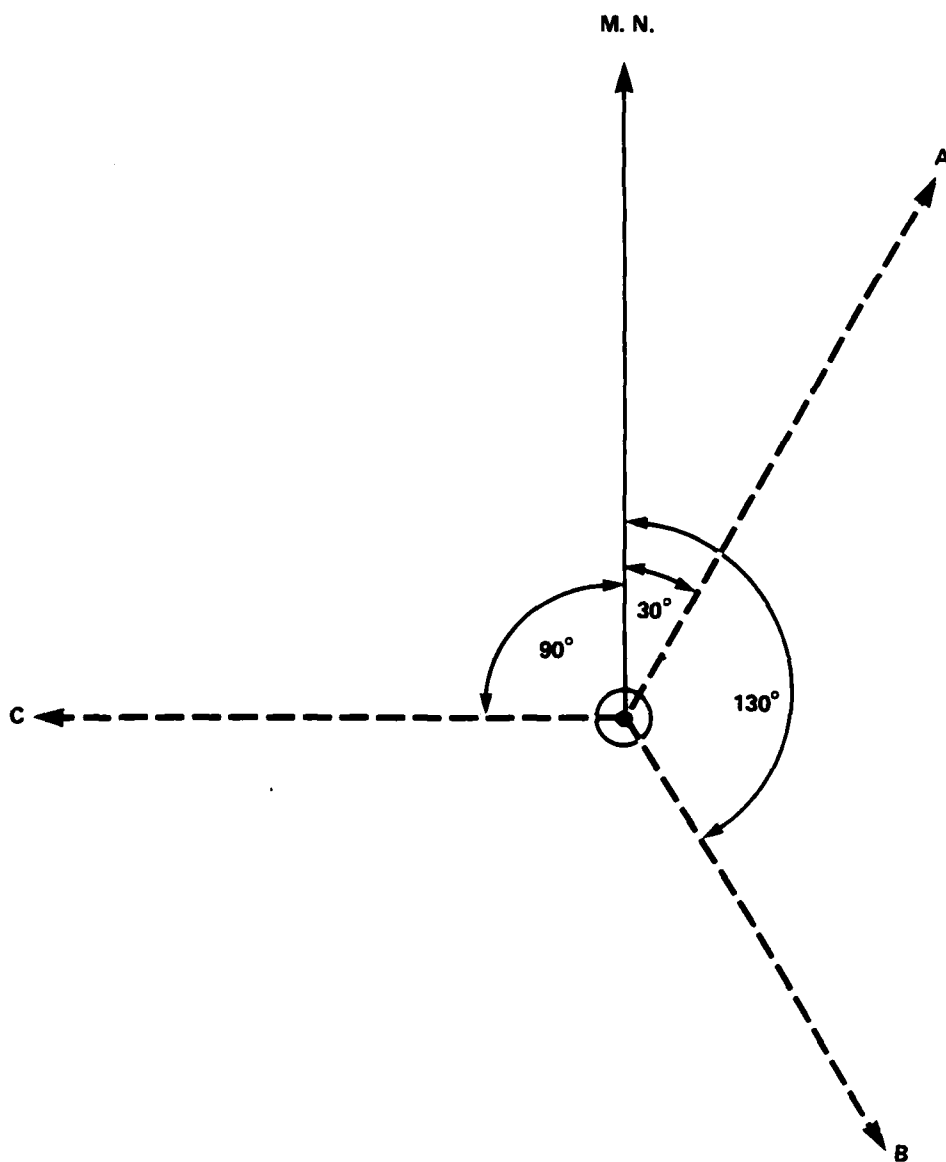


FIGURE 2. MAGNETIC BEARING OF GROUND LEGS

required to support material conditions and when environmentally feasible. Photographs shall include clear annotation as to the location of the hardware being photographed.

4.7 Cathodic Protection. Any moorings found to have cathodic protection will be inspected using the following procedures.

The underwater voltmeter will be used (after on-site calibration by the dive team) to probe the chain every 5 feet commencing with the buoy and bottom jewelry and continuing until the anchor is reached or the chain disappears into the bottom. All potential measurements will be recorded in the "Comments" column of Figure B-1. Before cleaning, divers will photograph each anode and record the thickness, type and accumulation of the coating. Several anodes should be brushed to remove the oxidation and the length, width and depth of the remaining zinc measured and photographed. Anodes in poor condition should be measured, reported and photographed.

5.0 DOCUMENTATION

The Engineer-in-Charge will document the inspection procedures used and record the data obtained by the dive team. He may require additional or alternative inspection procedures as deemed necessary during the course of the inspection. He will maintain a time log of events occurring during the inspection, and the master inspection form. In addition, the EIC must be prepared to debrief each diver, upon his return to the surface, in order to gain immediate knowledge of what the diver observed. The information obtained from the divers will be recorded, and this data will subsequently be the basis for the development of the moorings as-built configuration and for the preparation of the Fleet Mooring Inspection Report, which will contain the results of the inspection and recommendations for corrective maintenance actions.

While on site, the EIC will investigate the availability and cost of local mooring maintenance support. In addition he will conduct a cursory inspection of any on-shore Fleet Mooring Inventory (FMI) used for maintenance and repair or ready reserve. The type, size, quantity and general condition of the inventory shall be reported.

6.0 MEETINGS/BRIEFINGS

Upon arrival on site, the Engineer-in-Charge will conduct a pre-dive briefing to familiarize diving personnel with the mooring inspection procedures and to advise them of possible modifications to this

inspection plan. In addition, after approval by CHESDIV, the EIC will give a post-inspection debriefing to advise station personnel of the preliminary inspection findings.

7.0 LOGISTICS

7.1 UCT TWO. All arrangements for messing, berthing, and transportation of diver personnel, and the acquisition of a suitable dive platform/boat, will be the responsibility of UCT-2. In addition, the following equipment will be provided by the divers in support of this inspection:

- All diving support equipment
- Measuring aids
 - Inclinator
 - 100' tape measures for use underwater
 - Scales 1, 2, and 3 feet with large numbers suitable for underwater photo documentation
 - Accurate depth gauges
 - Marker tags to relocate or mark chain links or accessories
 - Calipers (24 inch minimum)
 - Go/no-go gauges
- Survey equipment
 - Compass (diver's)
 - Survey buoys with line (pop floats)
 - Surveying transits for establishing mooring buoy locations.
- Underwater voltmeters.
- Two Underwater still cameras (35mm) with film (color and B & W) and flash with spare batteries
- Cleaning equipment — Hand tools including wire brushes, chipping hammers, and sharp chisels. Water blaster with water or hydraulic power supply and brush tool.

7.2 **CHESNAVFACENGCOM.** The CHESNAVFACENGCOM Engineer-in-Charge will provide the following:

- Inspection plan
- Data sheets and forms
- 35mm surface camera and film
- Drafting supplies, graph paper, scales
- Calculator
- Pre-dive briefing data
- DM-26

ANNEX A

MEASURING DEVICES AND THEIR USE

ANNEX A

1.0 MEASURING DEVICES AND THEIR USE

Tables A-1 and A-2 outline the 80 and 90 percent measurements for mooring components. These tables are based on the standard sizes of mooring material listed in DM-26 and can be used to preset calipers before measuring various items. For example, a class BB riser type mooring will require calipers set to 3.15" (90%) and 2.8" (80%) for single link measurements on the riser. These values are then doubled obtaining 6.3" (90%) and 5.6" (80%) for double link measurements on the riser. Similarly, for the ground legs, single link measurements of 2.25" (90%) and 2.0" (80%) are obtained from Table A-1. These values are also doubled to obtain 4.5" and 4.0" for double link measurements. For the ground ring, the 90% and 80% single link measurements are determined to be 5.85" and 5.2".

The preferred measuring devices, however, are back-to-back 80 and 90 percent "go-no go" gauges. These gauges simplify the diver's job in that, unlike calipers, they have to be damaged to be knocked out of adjustment underwater, and they normally do not have to be reset between dives. The locations for measuring chain links are shown in Figure A-1. Figure A-2 contains the drawings and data required to fabricate these gauges. Although these gauges provide a simpler way of sampling the wire size of chain links and some jewelry, the divers still have to carry calipers to measure ground rings and chain connecting links.

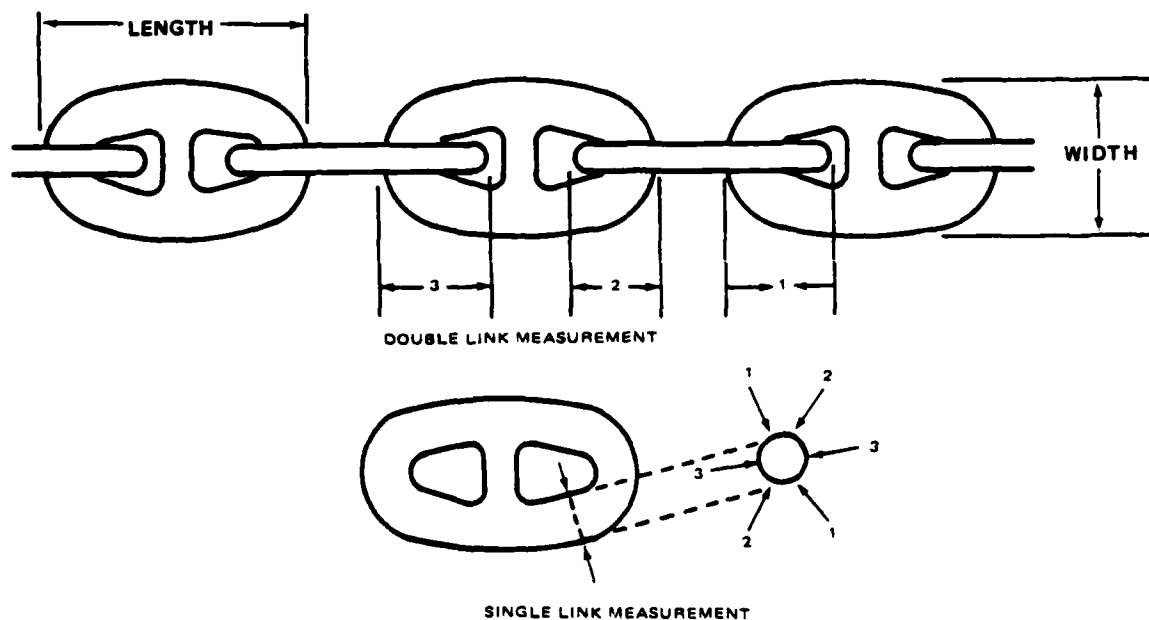


FIGURE A-1. LOCATIONS FOR TAKING CHAIN LINK MEASUREMENTS

TABLE A-1. SINGLE LINK MEASUREMENTS FOR COMPONENTS OF RISER-TYPE MOORINGS
(DOUBLE LINK MEASUREMENTS ARE OBTAINED BY MULTIPLYING SINGLE LINK MEASUREMENTS BY TWO)

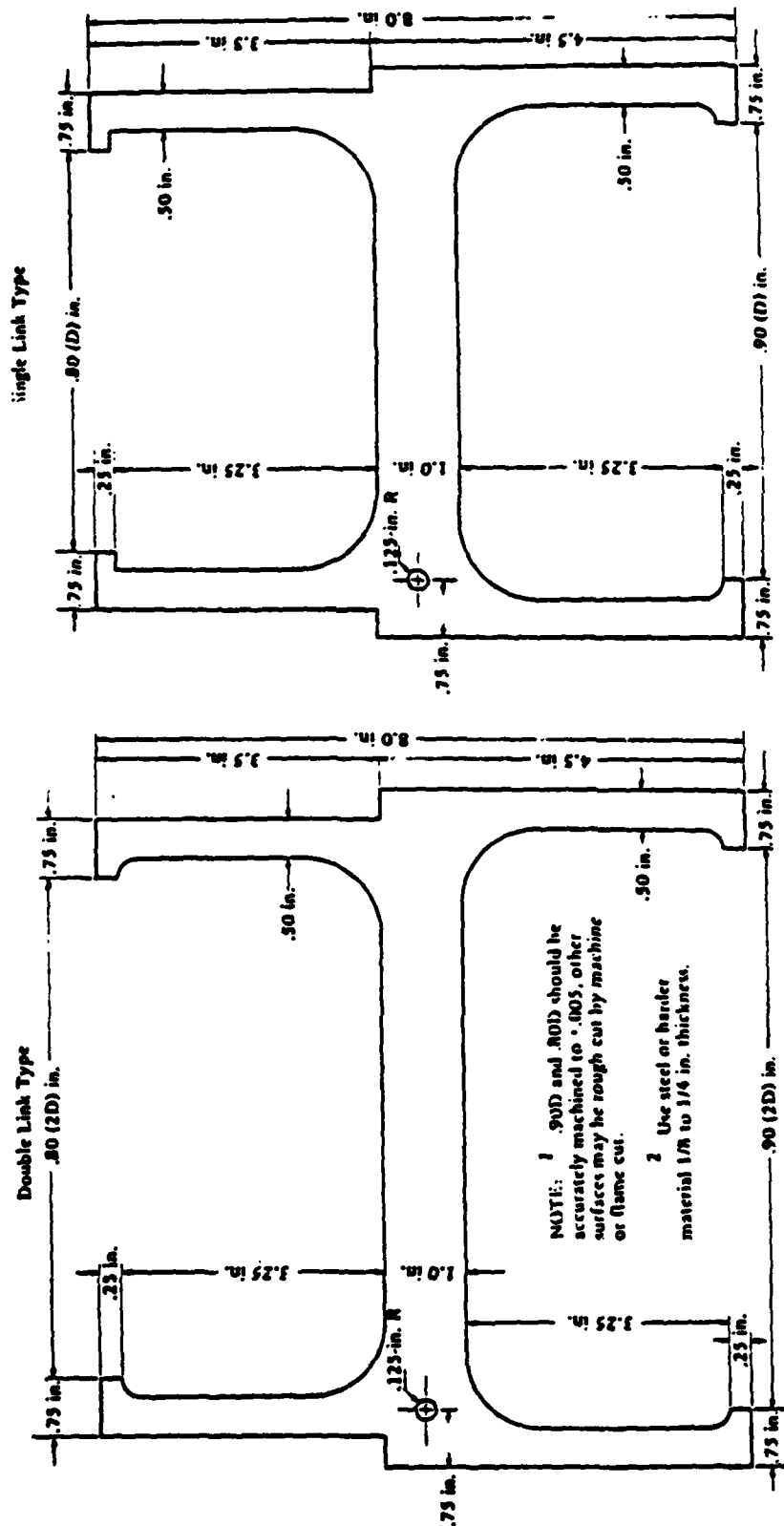
Class Moorings	Percent Remaining	Top of Bury		Riser Chain	Ground Ring		Ground Tackle		Anchor ^d Stockless w/Stabilizer	WT
		F-Shackle	End Link		All ¹	Minq	Chain	All ¹		
A-A	100	5 3/8	4 ¹	4	4"	6 ¹	4 3	2 3/4	25,000	-
	90	4.838	3.285	3.6	type	5.85	3.6 2.7	2.475		
	80	4.3	2.92	3.2		5.2	3.2 2.4	2.2		
B-B	100	4 15/16	3 15/16	3 ¹	3 ¹ "	6 ¹	4 3	2 ¹	20,000	13,000
	90	4.44	3.544	3.15	type	5.85	3.6 2.7	2.25		
	80	3.75	3.15	2.8		5.2	3.2 2.4	2.0		
C-C	100	4 15/16	3 15/16	3 ¹	3 ¹ "	6 ¹	4 3	2 ¹	18,000	10,000
	90	4.44	3.544	3.15	type	5.85	3.6 2.7	2.025		
	80	3.95	3.15	2.8		5.2	3.2 2.4	1.8		
D-D	100	4 3/16	3 3/4	3	3"	6	-	3	30,000	-
	90	3.769	3.375	2.7	type	5.4	-	2.7		
	80	3.35	3	2.4		4.8	-	2.4		
A	100	3 7/8	3 3/8	2 3/4	2 3/4"	5 ¹	-	2 3/4	25,000	-
	90	3.488	3.038	2.475	type	4.95	-	2.475		
	80	3.1	2.7	2.2		4.4	-	2.2		
B	100	3 ¹	3 1/8	2 ¹	2 ¹ "	4 3/4	-	2 ¹	20,000	13,000
	90	3.15	2.813	2.25	type	4.275	-	2 ¹		
	80	2.8	2.5	2.0		3.8	-	2 ¹		
C	100	3 1/8	2 3/4	2 ¹	2 ¹ "	4 ¹	-	2 ¹	10,000	10,000
	90	2.813	2.813	2.025	type	4.05	-	2 ¹		
	80	2.5	2.5	1.8		3.6	-	1.8		
D	100	2 13/16	2 ¹	2	2"	4	-	2	6,000	6,000
	90	2.531	2.25	1.8	type	3.6	-	1.8		
	80	2.25	2.0	1.6		3.2	-	1.6		
E	100	2 7/16	2 ¹	1 3/4	1 3/4"	3 ¹	-	1 3/4	4,000	4,000
	90	2.174	2.025	1.575	type	3.15	-	1.575		
	80	1.95	1.8	1.4		2.8	-	1.4		
F	100	1 3/4	1 3/4	1 ¹	1 ¹ "	2 3/4	-	1 ¹	5,000	2,000
	90	1.575	1.575	1.125	type	2.813	-	1.125		
	80	1.4	1.4	1.0		2.5	-	1.0		
G	100	1 1/16	.1	3/4	3/4"	1 7/8	-	3/4	3,000	300
	90	.956	.9	.675	type	1.688	-	.675		
	80	.85	.8	.6		1.5	-	.6		

1. All measurement vary according to manufacturer, see M-76
2. Assumes firm sand bottom
3. Assumes cast steel chain

TABLE A-2. SINGLE LINK MEASUREMENTS FOR COMPONENTS OF TELEPHONE-TYPE MOORINGS
(DOUBLE LINK MEASUREMENTS ARE OBTAINED BY MULTIPLYING SINGLE LINK MEASUREMENTS BY TWO)

Class Mooring	Percent Remaining	Top of Buoy and Link	Off-Shaft	Mony-to-Ground Jack	Spider	Ground Jack		Starless/Stabilizer	Lut
						Alt	Chain		
A-A	100	4'	4 11/16	4"	4	2 3/4"	2 3/4	25,000	-
	90	3.285	4.219	type	3.6	type	2.475		
	80	2.92	3.75		3.2		2.2		
B-B	100	4'	4 11/16	3 1/2"	4	2 1/2"	2 1/2	20,000	13,000
	90	3.285	4.219	type	3.6	type	2.25		
	80	2.92	3.75		3.2		2.0		
C-C	100	4'	4 11/16	3 1/2"	4	2 1/2"	2 1/2	18,000	10,000
	90	3.285	4.219	type	3.6	type	2.025		
	80	2.92	3.75		3.2		1.8		
D-D	100	4'	4 11/16	3"	4	3"	3	30,000	-
	90	3.285	4.219	type	3.6	type	2.7		
	80	2.92	3.75		3.2		2.4		
A	100	3 3/8	3 7/8	2 3/4"	2 3/4"	2 3/4"	2 3/4	25,000	-
	90	3.038	3.400	type	type	type	2.475		
	80	2.7	3.1				2.2		
B	100	3 3/8	3 1/2	2 1/2"	2 1/2"	2 1/2"	2 1/2	20,000	13,000
	90	3.038	3.15	type	type	type	2.25		
	80	2.7	2.8				2.0		
C	100	3 3/8	3 1/8	2 1/2"	2 1/2"	2 1/2"	2 1/2	18,000	10,000
	90	3.038	2.813	type	type	type	2.025		
	80	2.7	2.5				1.8		
D	100	3 1/8	2 13/16	2"	2"	2"	2	13,000	6,000
	90	3.038	2.511	type	type	type	1.8		
	80	2.7	2.25				1.6		

1. All measurements vary according to manufacturer, see IM-26
2. Assumes firm sand bottom
3. Assumes cast steel chain



D"	Single Link		Double Link		D"	Single Link		Double Link		D"	Single Link		Double Link	
	.90D	.80D	.90(2D)	.80(2D)		.90D	.80D	.90(2D)	.80(2D)		.90D	.80D	.90(2D)	.80(2D)
6-1/2	① 5.85	5.20	—	—	3-1/2	⑥ 3.15	2.80	① 5.60	5.60	2	① 1.80	1.60	② 3.60	3.20
6	② 6.40	4.80	—	—	3	⑦ 2.70	2.40	② 5.40	4.80	1-7/8	② 1.69	1.50	—	—
5-1/2	③ 4.95	4.40	—	—	2-3/4	⑧ 2.48	2.20	③ 4.96	4.40	1-3/4	③ 1.58	1.40	③ 3.06	2.80
4-1/2	④ 4.05	3.60	—	—	2-1/2	⑨ 2.25	2.00	④ 4.50	4.00	1-1/2	④ 1.35	1.20	④ 2.70	2.40
4	⑤ 3.60	3.20	⑤ 7.20	6.40	2-1/4	⑩ 2.03	1.80	⑤ 4.06	3.60	1-1/4	⑤ 1.125	1.00	—	—

FIGURE A-2. 10 PERCENT "GO-NO-GO" GAUGES

ANNEX B

SAMPLE INSPECTION FORMS

Figures B-1 and B-2 depict two forms the EIC and divers may use to record measurements and as-built summations.

MOORING DATA SUMMARY FOR PREPARATION OF AS-BUILTS

[illegible]

ANNEX C
MOORING HISTORICAL DATA SUMMARY
(GFI PROVIDED BY PWC PEARL HARBOR)

FLEET MOORING DATA SHEET

MRG ID = AM13 GENERAL LOC = Ford Island (Near F-13) DES CLASS = C 14

DATE ESTAB = 1943 DEPTH = 31.0 ft. (MLW) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-30.5" LONG. COORD. (W) = 157°-57'-32.0"

BUOY TYPE = Riser-chain w/ hawsepipe SIZE = 12' x 6' hi

FENDER = Wood FIBERGLASS COATING = No

CHAIN SIZE = 2 3/4"

SINKER = 1 WT. OF SINKER = 20,000 # PADEYE SIZE = 2 1/4" b

OF ANCHORS = 2

ANCHOR 1 WT = 60,000 #
ANCHOR 2 WT = (Do.)
ANCHOR 3 WT = -
ANCHOR 4 WT = -

PADEYE SIZE = 2 1/4" b
PADEYE SIZE = (Do.)
PADEYE SIZE = -
PADEYE SIZE = -

USAGE DURING PAST YEAR = 0 days

TYPE OF SHIPS MOORED = CV

DATE OF LAST REPAIR/COST = 1977/\$4,050

DATE OF LAST OVERHAUL/COST = 1/7

DATE OF LAST UNDERWATER INSPECTION = 1978
CONDUCTED BY = CHLSSIV (UCT Two)

NEXT SCHED. REPAIR = 1985

NEXT SCHED. OVERHAUL = 1987

DATE SHEET COMPILED = 8-82/MS

(*) Down-graded to class D after 1979 U/W Insp.

FLEET MOORING DATA SHEET

MRG ID = AMISA GENERAL LOC = Fora Island (N. F-13) DES CLASS = C

DATE ESTAB = 1945 DEPTH = 36.0 ft. (11.3 m) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-31.8" LONG. COORD. (W) = 157°-57'-34.3"

BUOY TYPE = Riser-chain w/ hawsepole SIZE = 12' x 6' hi

FENDER = Wood FIBERGLASS COATING = No

CHAIN SIZE = 2 3/4"

SINKER = 1 WT. OF SINKER = 60,000 lb PADEYE SIZE = 2 1/4"

OF ANCHORS = -

ANCHOR 1 WT =	<u>-</u>	PADEYE SIZE =	<u>-</u>
ANCHOR 2 WT =	<u>-</u>	PADEYE SIZE =	<u>-</u>
ANCHOR 3 WT =	<u>-</u>	PADEYE SIZE =	<u>-</u>
ANCHOR 4 WT =	<u>-</u>	PADEYE SIZE =	<u>-</u>

USAGE DURING PAST YEAR = 0 days

TYPE OF SHIPS MOORED = CV

DATE OF LAST REPAIR/COST = 1977 / \$4,050

DATE OF LAST OVERHAUL/COST = ? / ?

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESBY (UCT TWO)

NEXT SCHED. REPAIR = 1985

NEXT SCHED. OVERHAUL = 1987

DATE SHEET COMPILED = 8-82/MS

FLEET MOORING DATA SHEET

MRG ID = CMN GENERAL LOC = West Loch DES CLASS = G
 DATE ESTAB = 1943 DEPTH = 39.0 ft. (min) BOTTOM = Mud
 LAT. COORD. (N) = 21°-21'-26.8" LONG. COORD. (W) = 157°-59'-34.3"
 BUOY TYPE = Riser-chain w/ hawsepole SIZE = 12' ϕ x 6' hi
 FENDER = Rubber FIBERGLASS COATING = Yes
 CHAIN SIZE = 2 3/4"
 SINKER = 1 WT. OF SINKER = 34,000 # PADEYE SIZE = 2 1/4" ϕ
 # OF ANCHORS = 0
 ANCHOR 1 WT = - PADEYE SIZE = -
 ANCHOR 2 WT = - PADEYE SIZE = -
 ANCHOR 3 WT = - PADEYE SIZE = -
 ANCHOR 4 WT = - PADEYE SIZE = -
 USAGE DURING PAST YEAR = 365 days
 TYPE OF SHIPS MOORED = ~~Army~~ caisson
 DATE OF LAST REPAIR/COST = 1977 / 42,750
 DATE OF LAST OVERHAUL/COST = 5-70 / ?
 DATE OF LAST UNDERWATER INSPECTION = 1979
 CONDUCTED BY = CHESLIN (UCT TWO)
 NEXT SCHED. REPAIR = 1983
 NEXT SCHED. OVERHAUL = 1985
 DATE SHEET COMPILED = 8-82/MS

FLEET MOORING DATA SHEET

MRG ID = CMM GENERAL LOC = West Loch DES CLASS = G

DATE ESTAB = 1943 DEPTH = 39.0 ft. (MLW) BOTTOM = Mud

LAT. COORD. (N) = 21°-21'-24.6" LONG. COORD. (W) = 157°-59'-33.2"

BUOY TYPE = Riser-chain w/ hawse pipe SIZE = 12' x 6' hi

FENDER = Rubber FIBERGLASS COATING = yes

CHAIN SIZE = 2 3/4"

SINKER = 1 WT. OF SINKER = 34,000 lb PADEYE SIZE = 2 1/4"

OF ANCHORS = C

ANCHOR 1 WT =	<u>-</u>	PADEYE SIZE =	<u>-</u>
ANCHOR 2 WT =	<u>-</u>	PADEYE SIZE =	<u>-</u>
ANCHOR 3 WT =	<u>-</u>	PADEYE SIZE =	<u>-</u>
ANCHOR 4 WT =	<u>-</u>	PADEYE SIZE =	<u>-</u>

USAGE DURING PAST YEAR = 365 days

TYPE OF SHIPS MOORED = ~~Heavy~~ caisson

DATE OF LAST REPAIR/COST = 1977 / \$2,750

DATE OF LAST OVERHAUL/COST = 5-70 / ?

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESDIV (UCT TWO)

NEXT SCHED. REPAIR = 1983

NEXT SCHED. OVERHAUL = 1985

DATE SHEET COMPILED = 8-82/MS

FLEET MOORING DATA SHEET

MRG ID = CIAS GENERAL LOC = West Loch DES CLASS = G

DATE ESTAB = 1940 DEPTH = 42.0 Ft. (MLW) BOTTOM = Mud

LAT. COORD. (N) = 21°-21'-22.9" LONG. COORD. (W) = 157°-59'-33.1"

BUOY TYPE = Riser-chain w/ hanse pipe SIZE = 12'φ x 6'hi

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/4"

SINKER = 1 WT. OF SINKER = 34,000 # PADEYE SIZE = 2 1/4"

OF ANCHORS = 0

ANCHOR 1 WT =	<u>-</u>	PADEYE SIZE =	<u>-</u>
ANCHOR 2 WT =	<u>-</u>	PADEYE SIZE =	<u>-</u>
ANCHOR 3 WT =	<u>-</u>	PADEYE SIZE =	<u>-</u>
ANCHOR 4 WT =	<u>-</u>	PADEYE SIZE =	<u>-</u>

USAGE DURING PAST YEAR = 365 days

TYPE OF SHIPS MOORED = ~~Army~~ caisson

DATE OF LAST REPAIR/COST = 1977/82,750

DATE OF LAST OVERHAUL/COST = 5-70/ ?

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESDIV (UOT TRIO)

NEXT SCHED. REPAIR = 1988

NEXT SCHED. OVERHAUL = 1985

DATE SHEET COMPILED = 8-82/MS

FLEET MOORING DATA SHEET

MRG ID = 01M GENERAL LOC = Middle Loch (ZSMF) DES CLASS = C/1*

DATE ESTAB = 1950 DEPTH = 34.0 ft. (MLW) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-19.2" LONG. COORD. (W) = 157°-59'-00.6"

BUOY TYPE = Riser-chain w/ hawse pipe SIZE = 12' x 6' hi

FENDER = Wood FIBERGLASS COATING = No

CHAIN SIZE = 2 3/4"

SINKER = 1 WT. OF SINKER = 60,000 # PADEYE SIZE = 2 1/4"

OF ANCHORS = —

ANCHOR 1 WT = —
ANCHOR 2 WT = —
ANCHOR 3 WT = —
ANCHOR 4 WT = —

PADEYE SIZE = —
PADEYE SIZE = —
PADEYE SIZE = —
PADEYE SIZE = —

USAGE DURING PAST YEAR = 0

TYPE OF SHIPS MOORED = ?

DATE OF LAST REPAIR/COST = 1977 / \$4,850

DATE OF LAST OVERHAUL/COST = 3-78 / ?

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESDIV (UCT Two)

NEXT SCHED. REPAIR = 1985

NEXT SCHED. OVERHAUL = ~~1982~~ (1984)

DATE SHEET COMPILED = ~~8-82~~ 4-83 / NS

(*) Down-graded to class G after 1979 U/W Insp.

(*) Overhaul expected to be accomplished by Contr. 1162471-82-C-2164 in 1982.
However, DBS substituted vice this mooring in contract work.

FLEET MOORING DATA SHEET

MRG ID = 02N GENERAL LOC = Middle Lock (SHIP) DES CLASS = A (*)

DATE ESTAB = 1943 DEPTH = 33.0 ft. (MUD) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-23.9" LONG. COORD. (W) = 157°-59'-01.0"

BUOY TYPE = Riser-chain w/ hawser pipe SIZE = 12' ϕ x 6' 1/2"

FENDER = Rubber FIBERGLASS COATING = yes

CHAIN SIZE = 2 3/4"

SINKER = 1 WT. OF SINKER = 60,000 # PADEYE SIZE = 2 1/4" ϕ

OF ANCHORS = 4

ANCHOR 1 WT = 60,000 #
ANCHOR 2 WT = (Do.)
ANCHOR 3 WT = (Do.)
ANCHOR 4 WT = (Do.)

PADEYE SIZE = 2 1/4" ϕ
PADEYE SIZE = (Do.)
PADEYE SIZE = (Do.)
PADEYE SIZE = (Do.)

USAGE DURING PAST YEAR = 365 days

TYPE OF SHIPS MOORED = YO/YCV/OTEC

DATE OF LAST REPAIR/COST = 1976 / \$2,000

DATE OF LAST OVERHAUL/COST = ? / ?

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESBY (ACT TMO)

NEXT SCHED. REPAIR = 1980

NEXT SCHED. OVERHAUL = 1984

DATE SHEET COMPILED = 8-82/MS

(*) Low-graded to class D after 1979 U/W Insp.

FLEET MOORING DATA SHEET

MRG ID = 025 GENERAL LOC = Middle Loh (ZSMF) DES CLASS = A (*)

DATE ESTAB = 1943 DEPTH = 25.0 ft. (MLW) BOTTOM = Mud

LAT. COORD. (N) = 21° 22' - 20.8" LONG. COORD. (W) = 157° 59' - 05.2"

BUOY TYPE = Riser-chain w/ hawse pipe SIZE = 12' d x 6' hi

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/4"

SINKER = 1 WT. OF SINKER = 60,000 # PADEYE SIZE = 2 1/4" d

OF ANCHORS = 4

ANCHOR 1 WT = 60,000 #
ANCHOR 2 WT = (Co.)
ANCHOR 3 WT = (Co.)
ANCHOR 4 WT = (Co.)

PADEYE SIZE = 2 1/4" d
PADEYE SIZE = (Co.)
PADEYE SIZE = (Co.)
PADEYE SIZE = (Co.)

USAGE DURING PAST YEAR = 265 days

TYPE OF SHIPS MOORED = 40/70V/OTEC

DATE OF LAST REPAIR/COST = 1976/ \$2,000

DATE OF LAST OVERHAUL/COST = ?/?

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHSOW (UCT Two)

NEXT SCHED. REPAIR = 1987

NEXT SCHED. OVERHAUL = 1981

DATE SHEET COMPILED = 8-82/INS

(*) Down-graded to class Q after 1979 U/W Insp.

FLEET MOORING DATA SHEET

MRG ID = DEN GENERAL LOC = Middle Loch (ISMF) DES CLASS = A (*)

DATE ESTAB = 21°-22'-27.0" DEPTH = 34.0 ft. (MLW) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-27.0" LONG. COORD. (W) = 157°-59'-03.6"

BUOY TYPE = Riser-chain w/ hawse pipe SIZE = 12' ϕ x 6' hi

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/4"

SINKER = 1 WT. OF SINKER = 60,000 # PADEYE SIZE = 2 1/2" ϕ

OF ANCHORS = 4

ANCHOR 1 WT = 60,000 #
ANCHOR 2 WT = (Do.)
ANCHOR 3 WT = (Do.)
ANCHOR 4 WT = (Do.)

PADEYE SIZE = 2 1/2" ϕ
PADEYE SIZE = (Do.)
PADEYE SIZE = (Do.)
PADEYE SIZE = (Do.)

USAGE DURING PAST YEAR = 0 days

TYPE OF SHIPS MOORED = ? / OTEC

DATE OF LAST REPAIR/COST = 1977 / \$13,000

DATE OF LAST OVERHAUL/COST = 10-75 / ?

DATE OF LAST UNDERWATER INSPECTION = 1970
CONDUCTED BY = CHESBY (USN) Sub.

NEXT SCHED. REPAIR = 1986

NEXT SCHED. OVERHAUL = 1983

DATE SHEET COMPILED = 6-82 / VS

(*) Down-graded to class G after 1979 U/W Insp.

FLEET MOORING DATA SHEET

MRG ID = 023 GENERAL LOC = Middle Loch (ISMF) DES CLASS = A

DATE ESTAB = 1943 DEPTH = 33.0 ft. (11.1m) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-24.0" LONG. COORD. (W) = 157°-59'-07.8"

BUOY TYPE = Riser-chain w/ haws pipe (*) SIZE = 12' x 6' hi

FENDER = Wood FIBERGLASS COATING = No

CHAIN SIZE = 2 3/4"

SINKER = 1 WT. OF SINKER = 60,000 # PADEYE SIZE = 2 1/4" φ

OF ANCHORS = 4

ANCHOR 1 WT =	<u>60,000 #</u>
ANCHOR 2 WT =	<u>(50,000)</u>
ANCHOR 3 WT =	<u>(50,000)</u>
ANCHOR 4 WT =	<u>(50,000)</u>

PADEYE SIZE =	<u>2 1/4" φ</u>
PADEYE SIZE =	<u>(50,000)</u>
PADEYE SIZE =	<u>(50,000)</u>
PADEYE SIZE =	<u>(50,000)</u>

USAGE DURING PAST YEAR = 0 (*)

TYPE OF SHIPS MOORED = ?

DATE OF LAST REPAIR/COST = 1977/24,550

DATE OF LAST OVERHAUL/COST = 2/?

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESDIV (ACT 110)

NEXT SCHED. REPAIR = 1983

NEXT SCHED. OVERHAUL = 1983

DATE SHEET COMPILED = 8-87/MC

(*) Buoy broke loose from anchorage 1979 ; Buoy presently on shore at Waipia Pt.

FLEET MOORING DATA SHEET

MRG ID = 54N GENERAL LOC = Middle Loch (TEMP) DES CLASS = A (*)

DATE ESTAB = 1943 DEPTH = 32.0 ft (MIN) BOTTOM = Mud

LAT. COORD. (N) = 21° 22' - 30.1" LONG. COORD. (W) = 157° 59' - 06.2"

BUOY TYPE = Riser-chain w/ hawse pipe SIZE = 12' x 6' h

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/4"

SINKER = 1 WT. OF SINKER = 60,000 # PADEYE SIZE = 2 1/4" φ

OF ANCHORS = 4

ANCHOR 1 WT =	<u>60,000 #</u>
ANCHOR 2 WT =	<u>(Do.)</u>
ANCHOR 3 WT =	<u>(Do.)</u>
ANCHOR 4 WT =	<u>(Do.)</u>

PADEYE SIZE =	<u>2 1/4" φ</u>
PADEYE SIZE =	<u>(Do.)</u>
PADEYE SIZE =	<u>(Do.)</u>
PADEYE SIZE =	<u>(Do.)</u>

USAGE DURING PAST YEAR = 365 days

TYPE OF SHIPS MOORED = DER/ASR/YFN/OTEC

DATE OF LAST REPAIR/COST = 1979 / \$980

DATE OF LAST OVERHAUL/COST = 3-78 / ?

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESD'V (UCT Two)

NEXT SCHED. REPAIR = 1983

NEXT SCHED. OVERHAUL = 1985

DATE SHEET COMPILED = 8-82 / MS

(*) Down-graded to class G after 1979 U/N Insp.

FLEET MOORING DATA SHEET

MRG ID = 043 GENERAL LOC = Middle Loch (ISMF) DES CLASS = A (*)

DATE ESTAB = 1943 DEPTH = 22.0 ft. (MLLW) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-27.1" LONG. COORD. (W) = 157°-59'-10.4"

BUOY TYPE = Riser-chain w/ house pile SIZE = 12' x 6' hi

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/4"

SINKER = 1 WT. OF SINKER = 60,000 # PADEYE SIZE = 2 1/4" #

OF ANCHORS = 4

ANCHOR 1 WT = 60,000 #
ANCHOR 2 WT = (Do.)
ANCHOR 3 WT = (Do.)
ANCHOR 4 WT = (Do.)

PADEYE SIZE = 2 1/4" #
PADEYE SIZE = (Do.)
PADEYE SIZE = (Do.)
PADEYE SIZE = (Do.)

USAGE DURING PAST YEAR = 365 days

TYPE OF SHIPS MOORED = DER/ASR/YFN/OTEC

DATE OF LAST REPAIR/COST = 1979/\$13,000

DATE OF LAST OVERHAUL/COST = ?/?

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESDIN (ACT Two)

NEXT SCHED. REPAIR = 1985

NEXT SCHED. OVERHAUL = 1985

DATE SHEET COMPILED = 3-32/85

(*) Down-graded to class E after 1979 U/W Insp.

FLEET MOORING DATA SHEET

MRG ID = 2511 GENERAL LOC = Middle Loch (ZSMF) DES CLASS = D (*)

DATE ESTAB = 1944 DEPTH = 37.0 ft. (MLLW) BOTTOM = Mud

LAT. COORD. (N) = 21° 22' - 33.3" LONG. COORD. (W) = 157° 59' - 08.8"

BUOY TYPE = Riser-chain w/ hawsepipe SIZE = 12' x 6' hi

FENDER = rubber FIBERGLASS COATING = yes

CHAIN SIZE = 2 3/4"

SINKER = - WT. OF SINKER = - PADEYE SIZE = -

OF ANCHORS = 1

ANCHOR 1 WT = 60,000 #
ANCHOR 2 WT = -
ANCHOR 3 WT = -
ANCHOR 4 WT = -

PADEYE SIZE = 2 1/4" d
PADEYE SIZE = -
PADEYE SIZE = -
PADEYE SIZE = -

USAGE DURING PAST YEAR = ~~2-1-16~~

TYPE OF SHIPS MOORED = 2 / OTEC

DATE OF LAST REPAIR/COST = 1979 / 29,060

DATE OF LAST OVERHAUL/COST = ? / ?

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESDIV / UCT TWO

NEXT SCHED. REPAIR = 1986

NEXT SCHED. OVERHAUL = 1983

DATE SHEET COMPILED = 8-82 / MS

(*) Down-graded to class E after 1979 U/W Insp.

FLEET MOORING DATA SHEET

MRG ID = 25M GENERAL LOC = Middle Loch (ISMIF) DES CLASS = C (+)

DATE ESTAB = 1950 DEPTH = 24.0 ft. (MLW) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-31.8" LONG. COORD. (W) = 157°-59'-10.9"

BUOY TYPE = Riser-chain "7 hawsepipe SIZE = 12' ϕ x 6' hi

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/4"

SINKER = 1 WT. OF SINKER = 60,000 lb PADEYE SIZE = 2 1/4" ϕ

OF ANCHORS = 0

ANCHOR 1 WT = -
ANCHOR 2 WT = -
ANCHOR 3 WT = -
ANCHOR 4 WT = -

PADEYE SIZE = -
PADEYE SIZE = -
PADEYE SIZE = -
PADEYE SIZE = -

USAGE DURING PAST YEAR = ~~0 days~~

TYPE OF SHIPS MOORED = ?/? / OTEC

DATE OF LAST REPAIR/COST = 1976 / \$2,000

DATE OF LAST OVERHAUL/COST = ?/?

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESDIV (UET TWO)

NEXT SCHED. REPAIR = 1986

NEXT SCHED. OVERHAUL = 1988

DATE SHEET COMPILED = 8-87/VG

(+) Down-graded to class G after 1979 U/W Insp.

FLEET MOORING DATA SHEET

MRG ID = DES GENERAL LOC = Middle Loch (ISMF) DES CLASS = D(*)

DATE ESTAB = 1944 DEPTH = 24.0' (NLW) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-30.3" LONG. COORD. (W) = 157°-59'-13.0"

BUOY TYPE = Riser chain w/ hawsepipe SIZE = 12' x 6' hi

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/4"

SINKER = - WT. OF SINKER = - PADEYE SIZE = -

OF ANCHORS = 1

ANCHOR 1 WT = 60,000 #
ANCHOR 2 WT = -
ANCHOR 3 WT = -
ANCHOR 4 WT = -

PADEYE SIZE = 2 1/4"
PADEYE SIZE = -
PADEYE SIZE = -
PADEYE SIZE = -

USAGE DURING PAST YEAR = 365 days

TYPE OF SHIPS MOORED = CTEC -1

DATE OF LAST REPAIR/COST = 1979/4,680

DATE OF LAST OVERHAUL/COST = 1-71/?

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESDIV (UCT Two)

NEXT SCHED. REPAIR = 1980

NEXT SCHED. OVERHAUL = 1980

DATE SHEET COMPILED = 8-82/US

(*) Down-graded to class G after 1979 U/W Insp.

FLEET MOORING DATA SHEET

MRG ID = DG-1 GENERAL LOC = Middle Loch (ISMF) DES CLASS = D

DATE ESTAB = 1944 DEPTH = 35.0 ft. (MLL) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-36.4" LONG. COORD. (W) = 157°-59'-11.4"

BUOY TYPE = Riser chain w/ hawse pipe SIZE = 12' ϕ x 6' hi

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/4"

SINKER = - WT. OF SINKER = - PADEYE SIZE = -

OF ANCHORS = 1

ANCHOR 1 WT = 60,000 #
ANCHOR 2 WT = -
ANCHOR 3 WT = -
ANCHOR 4 WT = -

PADEYE SIZE = 2 1/4" ϕ
PADEYE SIZE = -
PADEYE SIZE = -
PADEYE SIZE = -

USAGE DURING PAST YEAR = 0 days

TYPE OF SHIPS MOORED = ? / OTEC / DD 948

DATE OF LAST REPAIR/COST = 1979 / \$780

DATE OF LAST OVERHAUL/COST = 3-78 / ?

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESIN / UCT TWO

NEXT SCHED. REPAIR = 1987

NEXT SCHED. OVERHAUL = 1984

DATE SHEET COMPILED = 8-82 / MS

FLEET MOORING DATA SHEET

MRG ID = DEIA GENERAL LOC = Middle Loch (ISMF) DES CLASS = C

DATE ESTAB = 1950 DEPTH = 35.0 ft. (MLLW) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-35.4" LONG. COORD. (W) = 157°-59'-13.4"

BUOY TYPE = Racer-chain w/ house pipe SIZE = 12' x 6' hi

FENDER = Rubber FIBERGLASS COATING = YES

CHAIN SIZE = 2 3/4"

SINKER = - WT. OF SINKER = - PADEYE SIZE = -

OF ANCHORS = 1

ANCHOR 1 WT = 60,000 #
ANCHOR 2 WT = -
ANCHOR 3 WT = -
ANCHOR 4 WT = -

PADEYE SIZE = 2 1/4" Ø
PADEYE SIZE = -
PADEYE SIZE = -
PADEYE SIZE = -

USAGE DURING PAST YEAR = ~~none~~

TYPE OF SHIPS MOORED = ? / OTEC / DD948

DATE OF LAST REPAIR/COST = 1976 / \$2,000

DATE OF LAST OVERHAUL/COST = ? / ?

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CRESOV (NOT TWO)

NEXT SCHED. REPAIR = 1987

NEXT SCHED. OVERHAUL = 1984

DATE SHEET COMPILED = 8-80/MS

FLEET MOORING DATA SHEET

MRG ID = P65 GENERAL LOC = Middle Loch (ISMF) DES CLASS = D

DATE ESTAB = 1944 DEPTH = 24.0 ft. (MLW) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-33.4" LONG. COORD. (W) = 157°-59'-15.5"

BUOY TYPE = Riser-chain w/ hawsepole SIZE = 12'φ × 6'hi

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/8"

SINKER = — WT. OF SINKER = — PADEYE SIZE = —

OF ANCHORS = 1

ANCHOR 1 WT = 60,000 #
ANCHOR 2 WT = —
ANCHOR 3 WT = —
ANCHOR 4 WT = —

PADEYE SIZE = 2 1/4" φ
PADEYE SIZE = —
PADEYE SIZE = —
PADEYE SIZE = —

USAGE DURING PAST YEAR = ~~0 days~~

TYPE OF SHIPS MOORED = ? / OTEC / DD948

DATE OF LAST REPAIR/COST = 1979 / \$8,780

DATE OF LAST OVERHAUL/COST = ? / ?

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESDIN / UCT TWO

NEXT SCHED. REPAIR = 1987

NEXT SCHED. OVERHAUL = 1984

DATE SHEET COMPILED = 8-82 / MS

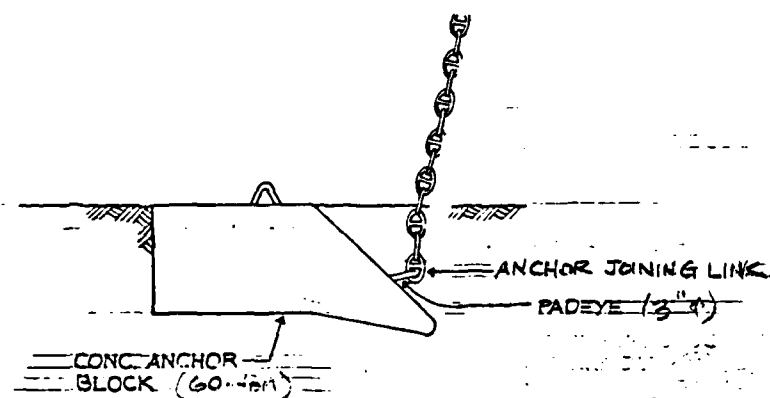
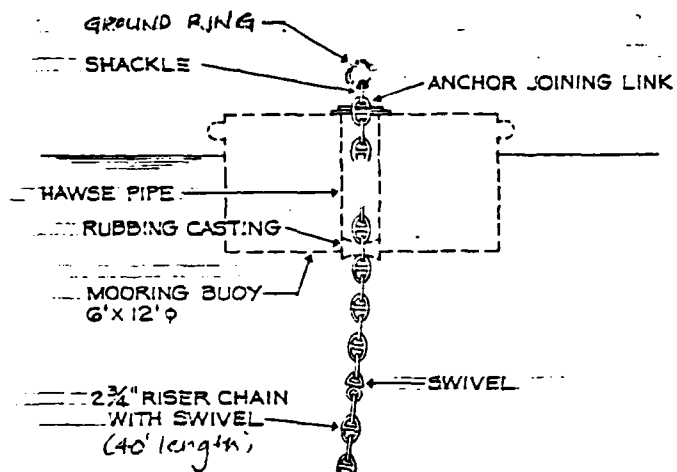
FLEET MOORING DATA SHEET

MRG ID = D7N GENERAL LOC = Middle Loch (ZSMF) DES CLASS = D
 DATE ESTAB = 1944 DEPTH = 34.0 ft. (MLW) BOTTOM = Mud
 LAT. COORD. (N) = 21° 22' - 39.6" LONG. COORD. (W) = 157° - 59' - 13.9"
 BUOY TYPE = Riser-chain w/ hawsepipe SIZE = 12' x 6' hi
 FENDER = Rubber (8"D) FIBERGLASS COATING = Yes
 CHAIN SIZE = 2 3/4"
 SINKER = - WT. OF SINKER = - PADEYE SIZE = -
 # OF ANCHORS = 1

ANCHOR 1 WT = <u>110,000 # (*)</u>	PADEYE SIZE = <u>3" Ø</u>
ANCHOR 2 WT = <u>-</u>	PADEYE SIZE = <u>-</u>
ANCHOR 3 WT = <u>-</u>	PADEYE SIZE = <u>-</u>
ANCHOR 4 WT = <u>-</u>	PADEYE SIZE = <u>-</u>

USAGE DURING PAST YEAR = ~~0 days~~
 TYPE OF SHIPS MOORED = ? / DD 34
 DATE OF LAST REPAIR/COST = 1979 / \$9,280
 DATE OF LAST OVERHAUL/COST = 8-82 / Remove & replace mooring = \$25,000 (*)
 DATE OF LAST UNDERWATER INSPECTION = 1979
 CONDUCTED BY = CHESD V (MCT TWO)
 NEXT SCHED. REPAIR = 1984
 NEXT SCHED. OVERHAUL = 1986
 DATE SHEET COMPILED = 8-82 / MS

(*) Overhaul finally accomplished under JO. 166-8161 (FY79 Funds)
 with funds expired 9-30-82 - only 10,000 # anchor available
 (removed from Soper's facility on 8-82); accomplished by F4NSY/
 floating crane & purchaser forces



MOORING D7N

(B-82/MS)

FLEET MOORING DATA SHEET

MRG ID = D7M1 GENERAL LOC = Middle Loch (ISMF) DES CLASS = C

DATE ESTAB = 1950 DEPTH = 29.0 ft. (MLW) BOTTOM = Mud

LAT. COORD. (N) = 21° 22' - 38.2" LONG. COORD. (W) = 157° 59' - 16.0"

BUOY TYPE = Riser-chain w/ hause pipe SIZE = 12' ϕ x 6' hi

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/4"

SINKER = - WT. OF SINKER = - PADEYE SIZE = -

OF ANCHORS = 1

ANCHOR 1 WT = 60,000 #
ANCHOR 2 WT = -
ANCHOR 3 WT = -
ANCHOR 4 WT = -

PADEYE SIZE = 2 1/4" ϕ
PADEYE SIZE = -
PADEYE SIZE = -
PADEYE SIZE = -

USAGE DURING PAST YEAR = ~~0 days~~

TYPE OF SHIPS MOORED = ? / DD 34

DATE OF LAST REPAIR/COST = 1975 / \$7,000

DATE OF LAST OVERHAUL/COST = 1-81 / \$25,000 (*)

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESV / UCT TWO

NEXT SCHED. REPAIR = 1984

NEXT SCHED. OVERHAUL = 1986

DATE SHEET COMPILED = 8-82 / MS

(*) Contr. N62471-80-C-1422 (Heavy-Tibbets) : Remove & replace mooring and
reposition buoy.

FLEET MOORING DATA SHEET

MRG ID = D73 GENERAL LOC = Middle Loch (ISMI-) DES CLASS = D

DATE ESTAB = 1944 DEPTH = 23.0 ft. (14.3m) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-36.6" LONG. COORD. (W) = 157°-59'-18.1"

BUOY TYPE = Riser-chain w/ hawsepipe SIZE = 12' d x 6' hi

FENDER = Rubber FIBERGLASS COATING = YES

CHAIN SIZE = 2 3/4"

SINKER = - WT. OF SINKER = - PADEYE SIZE = -

OF ANCHORS = 1

ANCHOR 1 WT = 60,000 #
ANCHOR 2 WT = -
ANCHOR 3 WT = -
ANCHOR 4 WT = -

PADEYE SIZE = 2 1/4" d
PADEYE SIZE = -
PADEYE SIZE = -
PADEYE SIZE = -

USAGE DURING PAST YEAR = ~~0 days~~

TYPE OF SHIPS MOORED = ? / DD 34

DATE OF LAST REPAIR/COST = 1976 / \$2,000

DATE OF LAST OVERHAUL/COST = 1-81 / \$25,000 (*)

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESDIN (ACT TWA)

NEXT SCHED. REPAIR = 1981

NEXT SCHED. OVERHAUL = 1986

DATE SHEET COMPILED = 3-82 / MS

(*) Contr. N624-71-80-C-1422 (Healy Tibbatts): Remove & replace mooring and refurbish buoy

FLEET MOORING DATA SHEET

MRG ID = 28N GENERAL LOC = Middle Loch (ESMF) DES CLASS = D

DATE ESTAB = 1945 DEPTH = 35.0 ft. (MLW) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-42.7" LONG. COORD. (W) = 157°-59'-16.5"

BUOY TYPE = Riser-chain w/ hawse pipe SIZE = 12' x 6' hi

FENDER = Rubber FIBERGLASS COATING = yes

CHAIN SIZE = 2 3/4"

SINKER = - WT. OF SINKER = - PADEYE SIZE = -

OF ANCHORS = 1

ANCHOR 1 WT = 60,000 #
ANCHOR 2 WT = -
ANCHOR 3 WT = -
ANCHOR 4 WT = -

PADEYE SIZE = 2 1/4"
PADEYE SIZE = -
PADEYE SIZE = -
PADEYE SIZE = -

USAGE DURING PAST YEAR = ~~0 days~~

TYPE OF SHIPS MOORED = ?

DATE OF LAST REPAIR/COST = 1977 / \$2,750

DATE OF LAST OVERHAUL/COST = 1-81 / \$25,000 (*)

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHLSSIV (HCT TWO)

NEXT SCHED. REPAIR = 1984

NEXT SCHED. OVERHAUL = 1986

DATE SHEET COMPILED = 8-82/MS

(*) Contr. N62471-RO-C-1422 (Healy Tillets): Remove & replace mooring and refuel buoy

FLEET MOORING DATA SHEET

MRG ID = DEM GENERAL LOC = Middle Loch (ISMF) DES CLASS = C

DATE ESTAB = 1950 DEPTH = 34.0 ft. (11.3m) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-41.2" LONG. COORD. (W) = 157°-59'-18.6"

BUOY TYPE = Riser-chain w/ kouscipes SIZE = 12' x 6' hi

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/4"

SINKER = - WT. OF SINKER = - PADEYE SIZE = -

OF ANCHORS = 1

ANCHOR 1 WT = 60,000 #
ANCHOR 2 WT = -
ANCHOR 3 WT = -
ANCHOR 4 WT = -

PADEYE SIZE = 2 1/4" φ
PADEYE SIZE = -
PADEYE SIZE = -
PADEYE SIZE = -

USAGE DURING PAST YEAR = 0 days

TYPE OF SHIPS MOORED = ? / YW101/YW83/YOG68

DATE OF LAST REPAIR/COST = 1977 / \$2,750

DATE OF LAST OVERHAUL/COST = 1-81 / \$25,000 (+)

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESEDIN (UCT 1140)

NEXT SCHED. REPAIR = 1982

NEXT SCHED. OVERHAUL = 1986

DATE SHEET COMPILED = 3-82/VLS

(*) Contr, UG2471-80-C-1422 (Healy - Tibbets) : remove & replace mooring and refurbish buoy

FLEET MOORING DATA SHEET

MRG ID = DES GENERAL LOC = Middle Loch (ISMF) DES CLASS = D

DATE ESTAB = 1945 DEPTH = 23.0 ft. (MLW) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-39.7" LONG. COORD. (W) = 157°-59'-20.7"

BUOY TYPE = Fiber-chain w/rowse pipe SIZE = 12' x 6' hi

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/4"

SINKER = - WT. OF SINKER = - PADEYE SIZE = -

OF ANCHORS = 1

ANCHOR 1 WT = 60,000 lb
ANCHOR 2 WT = -
ANCHOR 3 WT = -
ANCHOR 4 WT = -

PADEYE SIZE = 2 3/4" φ
PADEYE SIZE = -
PADEYE SIZE = -
PADEYE SIZE = -

USAGE DURING PAST YEAR = 0-2045

TYPE OF SHIPS MOORED = ? / YW 101 / YW 83 / YOG 68

DATE OF LAST REPAIR/COST = 1977 / \$2,750

DATE OF LAST OVERHAUL/COST = 1-81 / \$25,000 (*) 12-82 / \$31,000 (*)

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESD-V (UC) TIR

NEXT SCHED. REPAIR = 1980

NEXT SCHED. OVERHAUL = 1986

DATE SHEET COMPILED = 4-83
8-83 / JAG

~~(*) Contr. N62471-80-C-1422 (Healy-Tibbels): Remove & replace mooring and refurbish buoy~~

(*) Overhaul accomplished by Contr. N62471-82-C-2164;
Necessitated when mooring failed due to high winds during passage of
Hurricane Iwa 11/23/82;
This mooring done vice DIM of original contract.

FLEET MOORING DATA SHEET

MRG ID = D781 GENERAL LOC = Middle Loch (ISMF) DES CLASS = A ~~4~~

DATE ESTAB = 1946 DEPTH = 27.0 ft. (MLW) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-45.9" LONG. COORD. (W) = 157°-59'-19.1"

BUOY TYPE = Riser-chain w/ hawse pipe SIZE = 12' x 6' hi

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/4"

SINKER = 1 WT. OF SINKER = 60,000 # PADEYE SIZE = ~~2 1/4"~~ 2 3/4"

OF ANCHORS = 3

ANCHOR 1 WT = 60,000 #
ANCHOR 2 WT = (Co.)
ANCHOR 3 WT = (Co.)
ANCHOR 4 WT = -

PADEYE SIZE = ~~2 1/4"~~ 2 3/4"
PADEYE SIZE = (Co.)
PADEYE SIZE = (Co.)
PADEYE SIZE = -

USAGE DURING PAST YEAR = 365 days

TYPE OF SHIPS MOORED = YWN/YCG/YO/YOG/YON

DATE OF LAST REPAIR/COST = 1977/\$2,450

DATE OF LAST OVERHAUL/COST = ~~12-81/2~~ 12-82/\$51,000 (**)

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESDIV (UCT TWO)

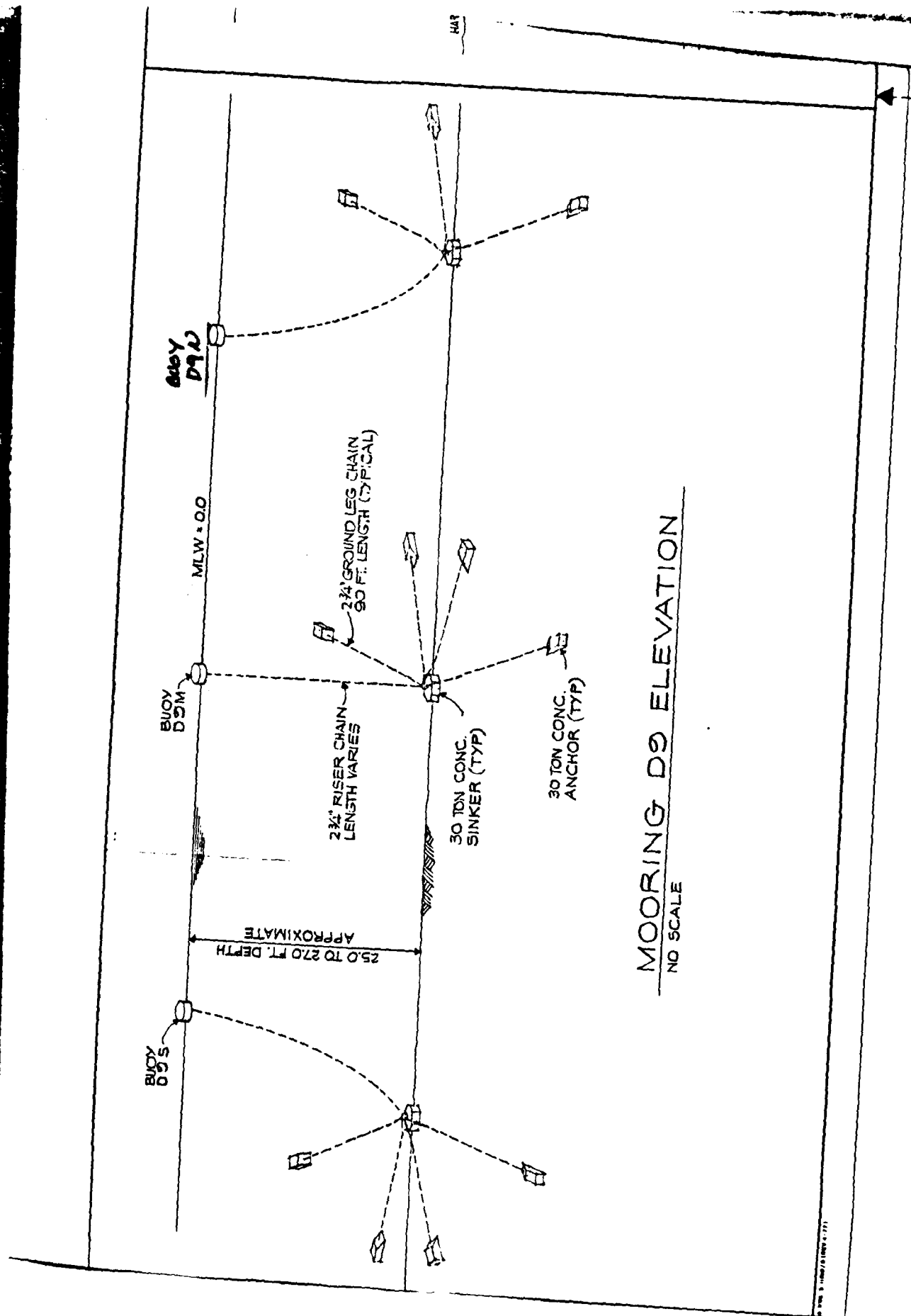
NEXT SCHED. REPAIR = 1984

NEXT SCHED. OVERHAUL = 1982 (**)

DATE SHEET COMPILED = ~~1-83~~ 1-82/MS

(*) Down graded to class F after 1979 U/W insp.

(**) Overhaul ~~expected to be~~ accomplished by Contr. N62471-82-C-2164



FLEET MOORING DATA SHEET

MRG ID = 2914 GENERAL LOC = Middle Loch (ISMF) DES CLASS = A-~~1st~~

DATE ESTAB = 1950 DEPTH = ~~26.0~~ 20.0 (11m.3) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-44.4" LONG. COORD. (W) = 157°-59'-21.2"

BUOY TYPE = Riser-chain w/ hawsepole SIZE = 12' x 6' hi

FENDER = Rubber FIBERGLASS COATING = yes

CHAIN SIZE = 2 3/4"

SINKER = 1 WT. OF SINKER = 60,000 # PADEYE SIZE = ~~2 1/4"~~ 2 3/4"

OF ANCHORS = 4

ANCHOR 1 WT = 60,000 #
ANCHOR 2 WT = (Do.)
ANCHOR 3 WT = (Do.)
ANCHOR 4 WT = (Do.)

PADEYE SIZE = ~~2 1/4"~~ 2 3/4"
PADEYE SIZE = (Do.) ✓
PADEYE SIZE = (Do.) ✓
PADEYE SIZE = (Do.) ✓

USAGE DURING PAST YEAR = 365 days

TYPE OF SHIPS MOORED = YWN/YOG/YO/YON /// 4-YW's

DATE OF LAST REPAIR/COST = 1979/\$450

DATE OF LAST OVERHAUL/COST = ~~1971/12~~ 12-82/\$51,000 (**)

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESDIV (NCT TUB)

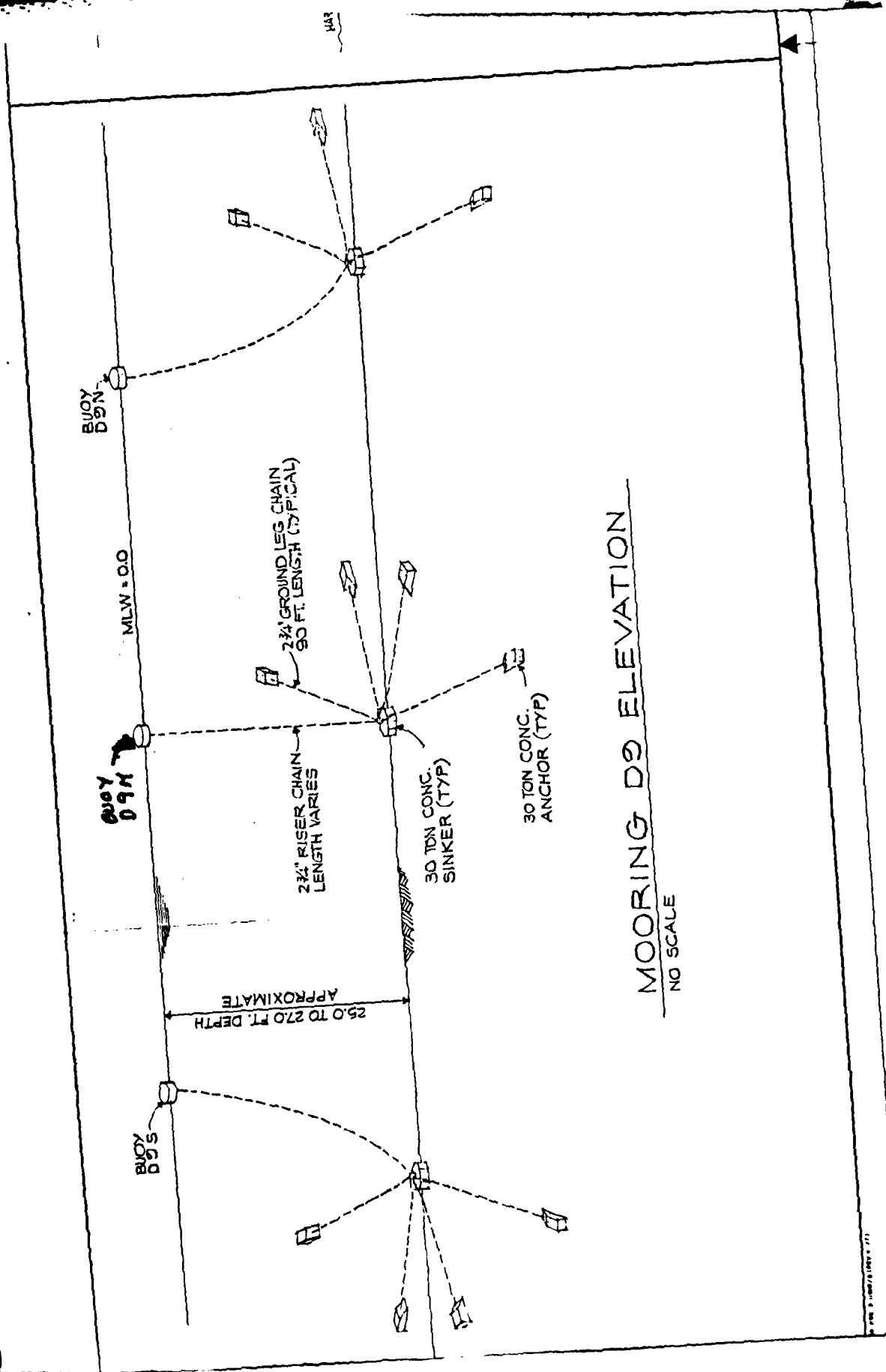
NEXT SCHED. REPAIR = 1984

NEXT SCHED. OVERHAUL = ~~1982 (**)~~ 1987

DATE SHEET COMPILED = ~~3-83~~ 1-83/MS

~~(*) Downgraded to class F after 1979 U/W Insp.~~

~~(**) Overhaul expected to be accomplished by Contr. V62171-82-C-2164~~



MOORING 09 ELEVATION
NO SCALE

FLEET MOORING DATA SHEET

MRG ID = D95 GENERAL LOC = Middle Loch (ICMIF) DES CLASS = A ~~BB~~

DATE ESTAB = 1946 DEPTH = ~~21.0~~ 21.0 ft. (alt.) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-42.9" LONG. COORD. (W) = 157°-59'-23.3"

BUOY TYPE = Riser-chain w/ Hancock pipe SIZE = 12' x 6' hi

FENDER = Rubber FIBERGLASS COATING = YES

CHAIN SIZE = 2 3/4"

SINKER = 1 WT. OF SINKER = 60,000 # PADEYE SIZE = ~~2 1/2"~~ 2 3/4" ϕ

OF ANCHORS = 4

ANCHOR 1 WT = 60,000 #
ANCHOR 2 WT = (Do.)
ANCHOR 3 WT = (Do.)
ANCHOR 4 WT = (Do.)

PADEYE SIZE = ~~2 1/2"~~ 2 3/4" ϕ
PADEYE SIZE = (Do.)
PADEYE SIZE = (Do.)
PADEYE SIZE = (Do.)

USAGE DURING PAST YEAR = 365 days

TYPE OF SHIPS MOORED = 4-YW's

DATE OF LAST REPAIR/COST = 1977 / \$3,275

DATE OF LAST OVERHAUL/COST = ~~11-71~~ 12-82 / \$51,000 (**)

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESON (UCT Two)

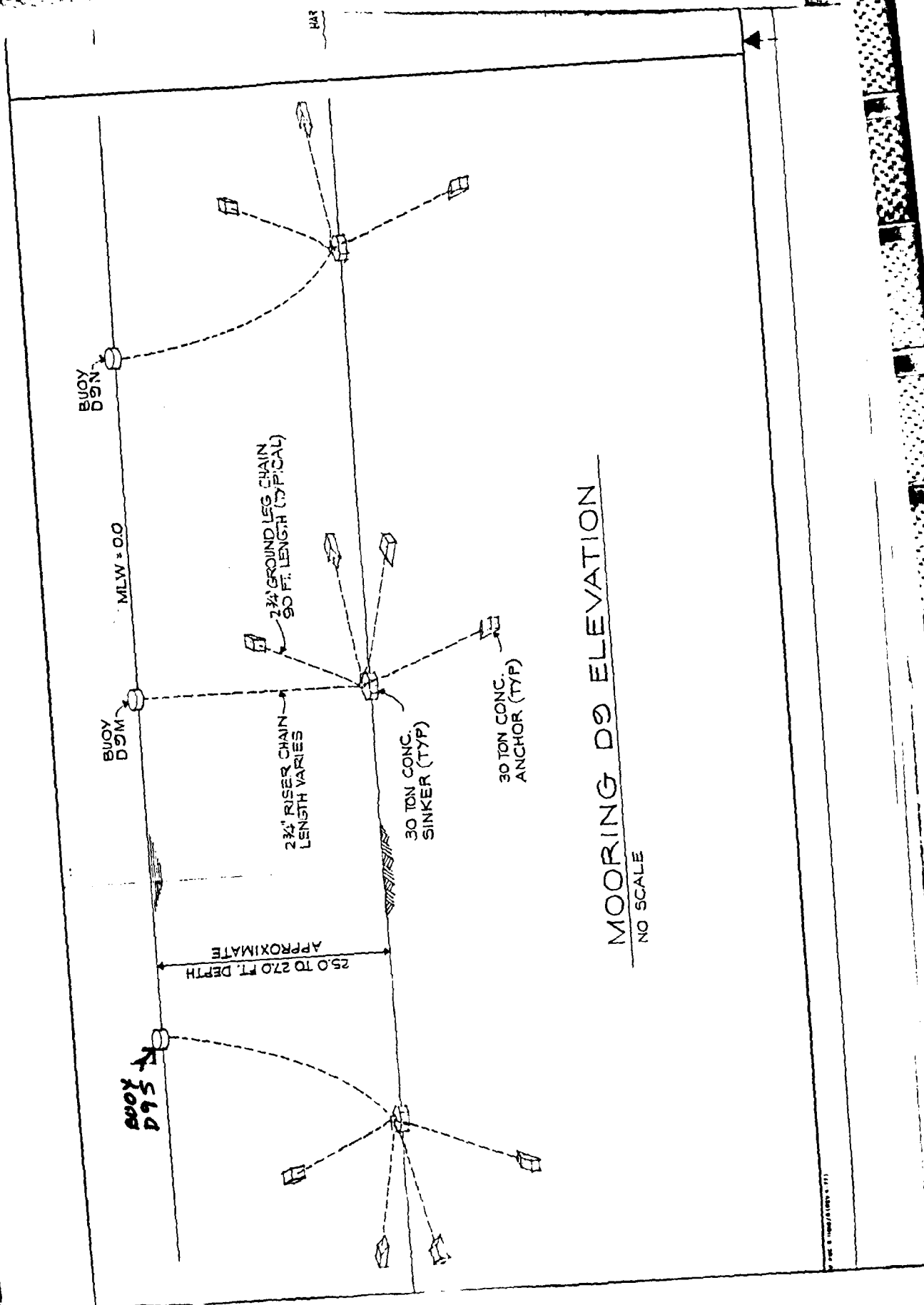
NEXT SCHED. REPAIR = 1984

NEXT SCHED. OVERHAUL = ~~1982~~ 1987

DATE SHEET COMPILED = ~~3-82~~ 4-83 / MS

~~(*) Down-graded to class F after 1979 U/W Insp.~~

(+) Overhaul expected to be accomplished by Contr. No. 471-82-C-2164.



FLEET MOORING DATA SHEET

MRG ID = DICN GENERAL LOC = Middle Loch (ISMF) DES CLASS = A (*)

DATE ESTAB = 1946 DEPTH = 24.0 ft. (11m) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-47.1" LONG. COORD. (W) = 157°-59'-21.7"

BUOY TYPE = Riser-chain w/ hawse pipe SIZE = 12' ϕ x 6' hi

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/4"

SINKER = 1 WT. OF SINKER = 60,000 lb PADEYE SIZE = 2 1/2" ϕ

OF ANCHORS = 4

ANCHOR 1 WT = 60,000 lb
ANCHOR 2 WT = (50,000)
ANCHOR 3 WT = (50,000)
ANCHOR 4 WT = (50,000)

PADEYE SIZE = 2 1/2" ϕ
PADEYE SIZE = (50,000)
PADEYE SIZE = (50,000)
PADEYE SIZE = (50,000)

USAGE DURING PAST YEAR = 365 days

TYPE OF SHIPS MOORED = YFN / 3-YFRN'S

DATE OF LAST REPAIR/COST = 1977 / \$10,240

DATE OF LAST OVERHAUL/COST = 9-71 / ?

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESON (UCT Two)

NEXT SCHED. REPAIR = 1984

NEXT SCHED. OVERHAUL = 1988

DATE SHEET COMPILED = 8-82/VG

(*) Down-graded to class F after 1979 U/V Insp

FLEET MOORING DATA SHEET

MRG ID = 51014 GENERAL LOC = Middle Loch (TSMF) DES CLASS = A (*)

DATE ESTAB = 1950 DEPTH = 24.0 ft. (MLW) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-47.5" LONG. COORD. (W) = 157°-59'-23.8"

BUOY TYPE = 2000-chain w/ transpico SIZE = 12' x 6' hi

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/4"

SINKER = 1 WT. OF SINKER = 60,000 # PADEYE SIZE = 2 1/4"

OF ANCHORS = 2

ANCHOR 1 WT = <u>60,000 #</u>	PADEYE SIZE = <u>2 1/4"</u>
ANCHOR 2 WT = <u>(60,000)</u>	PADEYE SIZE = <u>(2 1/4")</u>
ANCHOR 3 WT = <u>—</u>	PADEYE SIZE = <u>—</u>
ANCHOR 4 WT = <u>—</u>	PADEYE SIZE = <u>—</u>

USAGE DURING PAST YEAR = 365 days

TYPE OF SHIPS MOORED = YFN/3-YFRN'S /// YFND/YFNB/YR/YO

DATE OF LAST REPAIR/COST = 1979 / \$1,200

DATE OF LAST OVERHAUL/COST = 9-71 / ?

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESDIV (UCT TWO)

NEXT SCHED. REPAIR = 1986

NEXT SCHED. OVERHAUL = 1983

DATE SHEET COMPILED = 8-82/MS

(F) Down-graded to class F after 1979 U/W Insp.

FLEET MOORING DATA SHEET

MRG ID = DICS GENERAL LOC = Middle Loch (ISMF) DES CLASS = A (*)

DATE ESTAB = 1946 DEPTH = 27.0 ft. (MLW) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-46.0" LONG. COORD. (W) = 157°-59'-25.9"

BUOY TYPE = River chain w/ hawsepipe SIZE = 12' x 6' hi

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/4"

SINKER = 1 WT. OF SINKER = 60,000 lb PADEYE SIZE = 2 1/4" b

OF ANCHORS = 4

ANCHOR 1 WT = 60,000 lb
ANCHOR 2 WT = (Do.)
ANCHOR 3 WT = (Do.)
ANCHOR 4 WT = (Do.)

PADEYE SIZE = 2 1/4" b
PADEYE SIZE = (Do.)
PADEYE SIZE = (Do.)
PADEYE SIZE = (Do.)

USAGE DURING PAST YEAR = 365 days

TYPE OF SHIPS MOORED = YFND/YFNB/YR/YO

DATE OF LAST REPAIR/COST = 1977/ \$3275

DATE OF LAST OVERHAUL/COST = 9-71 / ?

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESIN (UCT TWA)

NEXT SCHED. REPAIR = 1986

NEXT SCHED. OVERHAUL = 1983

DATE SHEET COMPILED = 8-82/MS

(*) Down-graded to class F after 1979 U/W Insp

FLEET MOORING DATA SHEET

MRG ID = 0111 GENERAL LOC = Middle Loch (ISMF) DES CLASS = A (*)

DATE ESTAB = 1946 DEPTH = 23.0 ft. (MLW) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-52.2" LONG. COORD. (W) = 157°-59'-24.2"

BUOY TYPE = Riser-chain w/ hawsepipe SIZE = 12'6" x 6'6"

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/4"

SINKER = 1 WT. OF SINKER = 60,000 # PADEYE SIZE = 2 1/4"

OF ANCHORS = 4

ANCHOR 1 WT = 60,000 #
ANCHOR 2 WT = (50,000)
ANCHOR 3 WT = (50,000)
ANCHOR 4 WT = (50,000)

PADEYE SIZE = 2 1/4"
PADEYE SIZE = (50,000)
PADEYE SIZE = (50,000)
PADEYE SIZE = (50,000)

USAGE DURING PAST YEAR = 365 days

TYPE OF SHIPS MOORED = YR DH / YR DH

DATE OF LAST REPAIR/COST = 1979 / \$1,730

DATE OF LAST OVERHAUL/COST = 5.70 / ?

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = GHESDIV (NCT TNO)

NEXT SCHED. REPAIR = 1985

NEXT SCHED. OVERHAUL = 1985

DATE SHEET COMPILED = 8-82/MS

(*) Down-graded to class D after 1979 U/W Insp.

FLEET MOORING DATA SHEET

MRG ID = 2114 GENERAL LOC = Middle Loch (SCAF) DES CLASS = A(*)

DATE ESTAB = 1950 DEPTH = 27.0 ft. (MLW) BOTTOM = Mud

LAT. COORD. (N) = 21° 22' - 56.7" LONG. COORD. (W) = 157° 59' - 26.2"

BUOY TYPE = River chain w/ hawser pipe SIZE = 12" ϕ x 6' hi

FENDER = rubber FIBERGLASS COATING = yes

CHAIN SIZE = 2 3/4"

SINKER = 1 WT. OF SINKER = 60,000 # PADEYE SIZE = 2 1/4" ϕ

OF ANCHORS = 3

ANCHOR 1 WT = <u>60,000 #</u>	PADEYE SIZE = <u>2 1/4" ϕ</u>
ANCHOR 2 WT = <u>(Lo.)</u>	PADEYE SIZE = <u>(Lo.)</u>
ANCHOR 3 WT = <u>(Lo.)</u>	PADEYE SIZE = <u>(Lo.)</u>
ANCHOR 4 WT = <u>--</u>	PADEYE SIZE = <u>--</u>

USAGE DURING PAST YEAR = 365 days

TYPE OF SHIPS MOORED = YRDH/YRDH

DATE OF LAST REPAIR/COST = 1977/24,650

DATE OF LAST OVERHAUL/COST = 8-70/ ?

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHFDIV (NCT TUG)

NEXT SCHED. REPAIR = 1980

NEXT SCHED. OVERHAUL = 1985

DATE SHEET COMPILED = 8-82/MS

(*) Down-graded to class D after 1979 U/W Insp.

FLEET MOORING DATA SHEET

MRG ID = DHIS GENERAL LOC = Middle Loch (ZSMF) DES CLASS = A(*)

DATE ESTAB = 1946 DEPTH = 27.0 ft. (MLW) BOTTOM = Mud

LAT. COORD. (N) = 21° 22' 49.2" LONG. COORD. (W) = 157° 59' 28.4"

BUOY TYPE = Riser-chain ^{tension bar} ~~107~~ SIZE = 12' ϕ x 6' hi

FENDER = Rubber (top & side) FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/4"

SINKER = 1 WT. OF SINKER = 60,000 lb PADEYE SIZE = 2 1/4"

OF ANCHORS = 4

ANCHOR 1 WT = 60,000 lb
ANCHOR 2 WT = 10,000
ANCHOR 3 WT = 10,000
ANCHOR 4 WT = 10,000

PADEYE SIZE = 2 1/4"
PADEYE SIZE = 1 1/2"
PADEYE SIZE = 1 1/2"
PADEYE SIZE = 1 1/2"

USAGE DURING PAST YEAR = 0 days

TYPE OF SHIPS MOORED = ?

DATE OF LAST REPAIR/COST = 1977/ \$3,275

DATE OF LAST OVERHAUL/COST = 4-68/ ?

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESDIN/UCT TUB

NEXT SCHED. REPAIR = 1988

NEXT SCHED. OVERHAUL = 1985

DATE SHEET COMPILED = 8-82/MS

(*) down-graded to class D after 1979 U/W Insp.

FLEET MOORING DATA SHEET

MRG ID = 512N GENERAL LOC = Middle Loch (ICMIF) DES CLASS = A(+)

DATE ESTAB = 1946 DEPTH = 24.0 ft. (MLW) BOTTOM = Mud

LAT. COORD. (N) = 21° 22' 55.3" LONG. COORD. (W) = 157° 59' 26.8"

BUOY TYPE = Riser-chain w/hauser pipe SIZE = 12' x 6' hi

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/4"

SINKER = 1 WT. OF SINKER = 60,000 # PADEYE SIZE = 2 1/4" b

OF ANCHORS = 4

ANCHOR 1 WT = 60,000 #
ANCHOR 2 WT = (Don)
ANCHOR 3 WT = (Don)
ANCHOR 4 WT = (Don)

PADEYE SIZE = 2 1/4" b
PADEYE SIZE = (Don)
PADEYE SIZE = (Don)
PADEYE SIZE = (Don)

USAGE DURING PAST YEAR = 365 days

TYPE OF SHIPS MOORED = YTM/YTM/YFR/YF

DATE OF LAST REPAIR/COST = 1977/\$2,750

DATE OF LAST OVERHAUL/COST = 2-74/ ?

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESDIV/UCT Two

NEXT SCHED. REPAIR = 1987

NEXT SCHED. OVERHAUL = 1984

DATE SHEET COMPILED = 5-82/MS

(*) Down-graded to class F after 1979 U/W Insp.

FLEET MOORING DATA SHEET

MRG ID = D1211 GENERAL LOC = Middle Loch (ZSMF) DES CLASS = A (x)

DATE ESTAB = 1950 DEPTH = 26.0 ft. (MLW) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-53.8" LONG. COORD. (W) = 157°-59'-28.9"

BUOY TYPE = Riser-chain w/ hawse pipe SIZE = 12' x 6' h.i.

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/4"

SINKER = WT. OF SINKER = 60,000 lb PADEYE SIZE = 2 1/4" φ

OF ANCHORS = 2

ANCHOR 1 WT =	<u>60,000 lb</u>
ANCHOR 2 WT =	<u>1500</u>
ANCHOR 3 WT =	<u> </u>
ANCHOR 4 WT =	<u> </u>

PADEYE SIZE =	<u>2 1/4" φ</u>
PADEYE SIZE =	<u>(L.S.)</u>
PADEYE SIZE =	<u> </u>
PADEYE SIZE =	<u> </u>

USAGE DURING PAST YEAR = 365 days

TYPE OF SHIPS MOORED = YTM/YTM/YFR/YF

DATE OF LAST REPAIR/COST = 1977/ \$3,275

DATE OF LAST OVERHAUL/COST = 2-74/ ?

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESLIV (ACT TWO)

NEXT SCHED. REPAIR = 1987

NEXT SCHED. OVERHAUL = 1984

DATE SHEET COMPILED = 6-82/MS

(*) Down-graded to class E after 1979 U/W Insp.

FLEET MOORING DATA SHEET

MRG ID = D125 GENERAL LOC = Middle Loch (ESMF) DES CLASS = A(*)

DATE ESTAB = 1946 DEPTH = 22.0 ft. (MLW) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-52.3" LONG. COORD. (W) = 157°-59'-31.0"

BUOY TYPE = Riser-chain w/ haws pipe SIZE = 12' x 6' hi

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/4"

SINKER = 1 WT. OF SINKER = 60,000 lb PADEYE SIZE = 2 1/4" d

OF ANCHORS = 4

ANCHOR 1 WT = 60,000 lb

PADEYE SIZE = 2 1/4" d

ANCHOR 2 WT =

PADEYE SIZE =

ANCHOR 3 WT =

PADEYE SIZE =

ANCHOR 4 WT =

PADEYE SIZE =

USAGE DURING PAST YEAR = 0 days

TYPE OF SHIPS MOORED = ?

DATE OF LAST REPAIR/COST = 1977/03,275

DATE OF LAST OVERHAUL/COST = 9-71/?

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESIN (NCT Two)

NEXT SCHED. REPAIR = 1987

NEXT SCHED. OVERHAUL = 1984

DATE SHEET COMPILED = 8-82/MC

Regraded to class F after 1979 U/W Insp.

FLEET MOORING DATA SHEET

MRG ID = DP1N GENERAL LOC = Deperning Pac. DES CLASS = A (*)

DATE ESTAB = 1942 DEPTH = 40.0 ft. (MLW) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-12.0" LONG. COORD. (W) = 157°-56'-33.6"

BUOY TYPE = Riser-chain w/ hawsepole SIZE = 12' ϕ x 6' hi

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/4"

SINKER = 1 WT. OF SINKER = 60,000 # PADEYE SIZE = 2 1/4" ϕ

OF ANCHORS = 4

ANCHOR 1 WT = 60,000 #
ANCHOR 2 WT = (Do.)
ANCHOR 3 WT = (Do.)
ANCHOR 4 WT = (Do.)

PADEYE SIZE = 2 1/4" ϕ
PADEYE SIZE = (Do.)
PADEYE SIZE = (Do.)
PADEYE SIZE = (Do.)

USAGE DURING PAST YEAR = 10 days

TYPE OF SHIPS MOORED = LHA/CC/CV

DATE OF LAST REPAIR/COST = 1977 / \$3,000

DATE OF LAST OVERHAUL/COST = 2-82 / Installation cost = \$22,000 (**)

DATE OF LAST UNDERWATER INSPECTION = —
CONDUCTED BY = —

NEXT SCHED. REPAIR = 1985

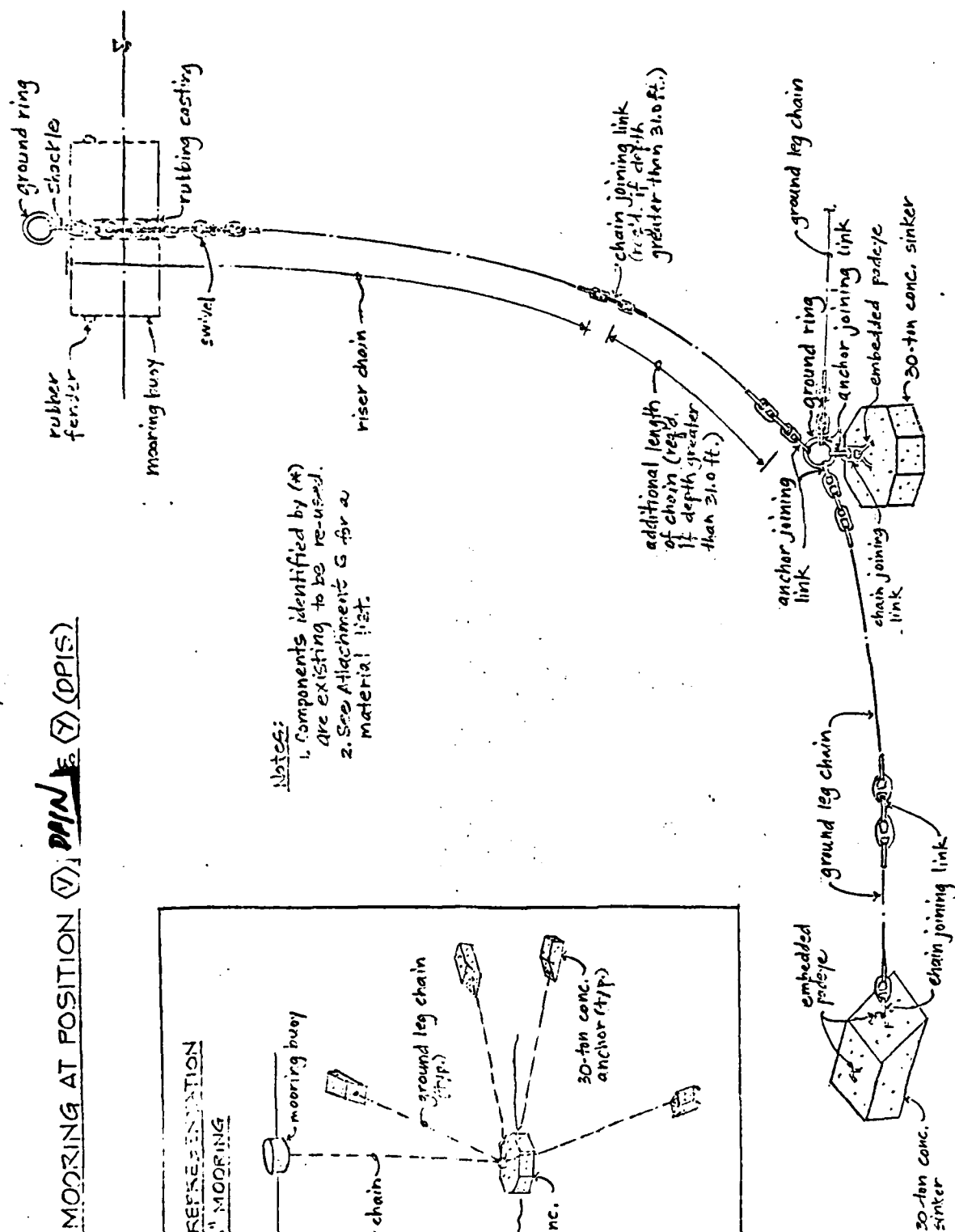
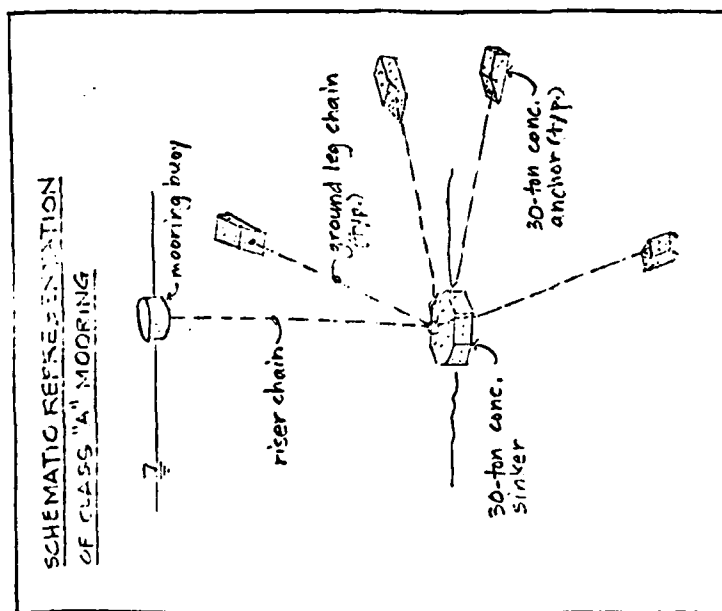
NEXT SCHED. OVERHAUL = 1987

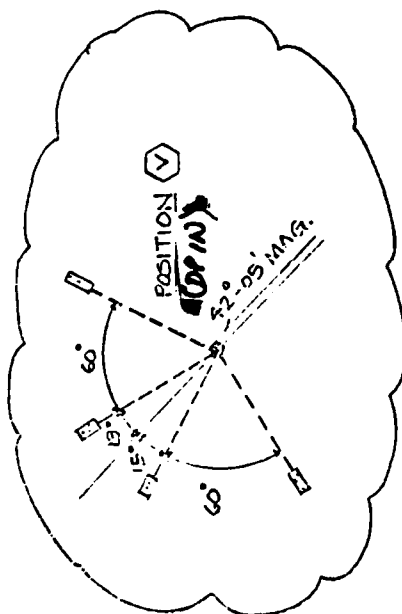
DATE SHEET COMPILED = 6-82/MC

(*) Mooring was Class C prior to 2/82; was relocated from DIN 4/81

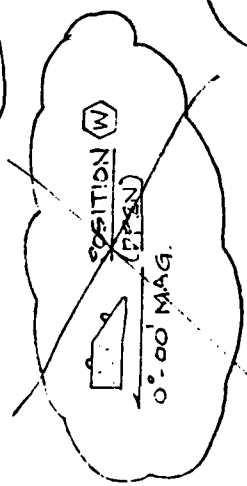
(**) PWC J.O. 170-6626, completed 2/82; PHASE I floating crane and diver services & PWC shop forces; Super URGENT accomplishment for LHA deperring 4/82.

CLASS "A" MOORING AT POSITION (V), ~~DPIN~~ ~~E~~ (Y) (DPIS)

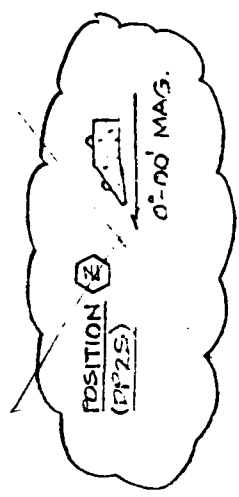
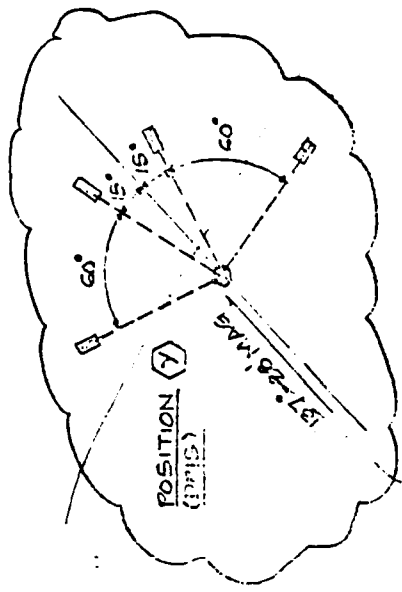




MOORING ANCHOR BLOCK LAYOUT



C-43



FLEET MOORING DATA SHEET

MRG ID = DP1G GENERAL LOC = Deforming Fac. DES CLASS = A (+)

DATE ESTAB = 1942 DEPTH = 40.0 ft. (41.1) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-00.0" LONG. COORD. (W) = 157°-58'-35.7"

BUOY TYPE = Riser-chain w/ hawsepipe SIZE = 12' ϕ x 6' hi

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/4"

SINKER = 1 WT. OF SINKER = 60,000 # PADEYE SIZE = 2 1/4" ϕ

OF ANCHORS = 4

ANCHOR 1 WT = 60,000 #
ANCHOR 2 WT = (Do.)
ANCHOR 3 WT = (Do.)
ANCHOR 4 WT = (Do.)

PADEYE SIZE = 2 1/4" ϕ
PADEYE SIZE = (Do.)
PADEYE SIZE = (Do.)
PADEYE SIZE = (Do.)

USAGE DURING PAST YEAR = 10 days

TYPE OF SHIPS MOORED = LHA/CC/CV

DATE OF LAST REPAIR/COST = -

DATE OF LAST OVERHAUL/COST = 3-82/Installation cost = \$22,000 (**)

DATE OF LAST UNDERWATER INSPECTION = -
CONDUCTED BY = -

NEXT SCHED. REPAIR = 1985

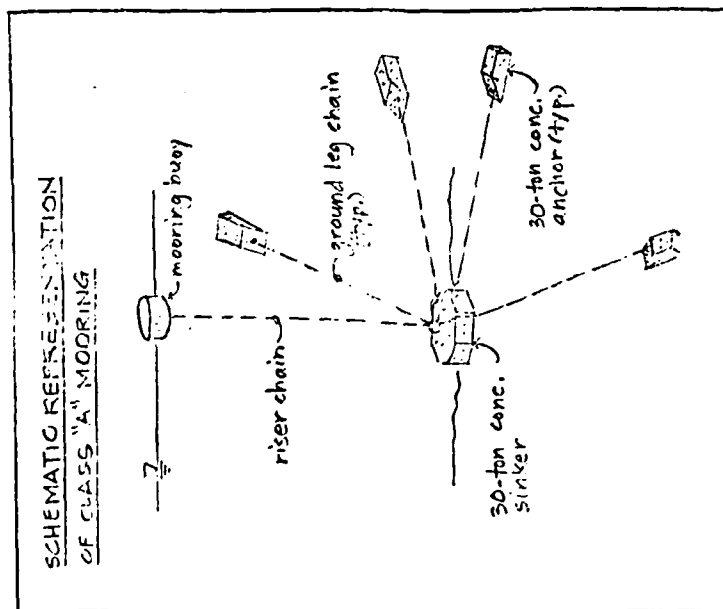
NEXT SCHED. OVERHAUL = 1987

DATE SHEET COMPILED = 3-82/MS

(*) Mooring was Class C prior to 2/82; was relocated from DLS 4/81

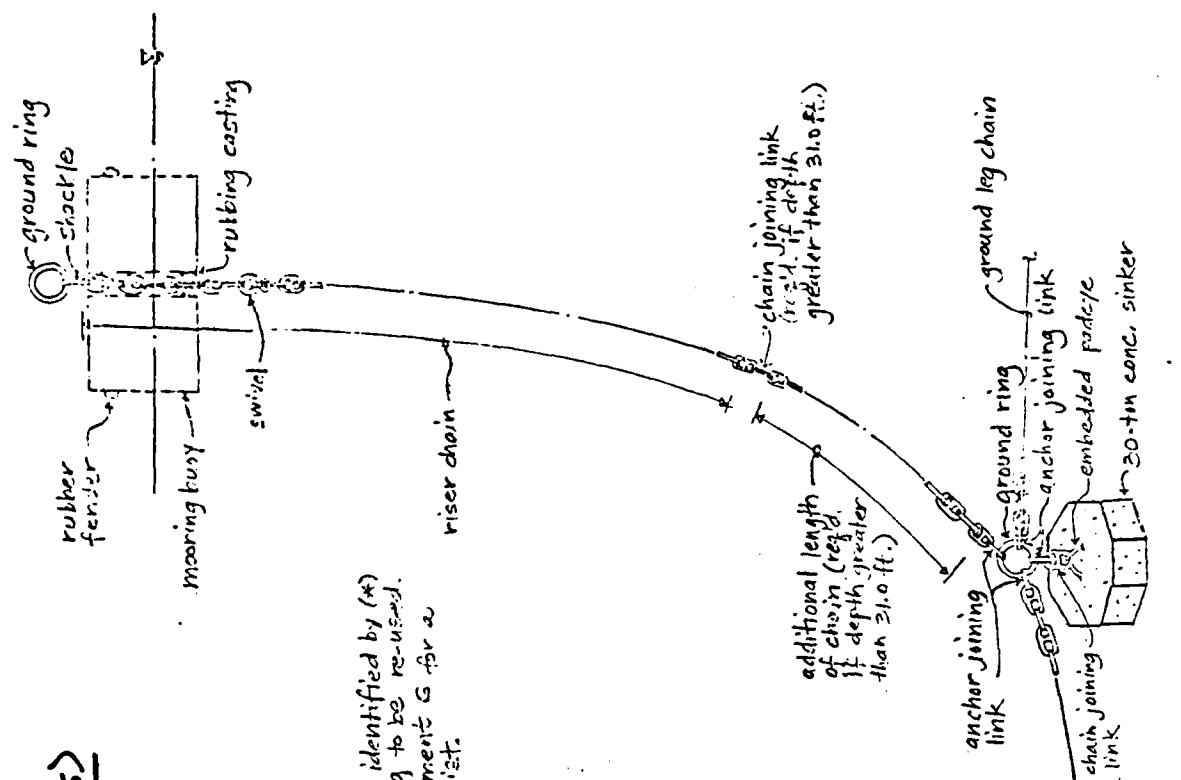
(**) FWC J.O. 190-6626, completed 3/82; PHNSY floating crane and diver services & FWC shop forces; super URGENT accomplishment for LHA deforming 4/82.

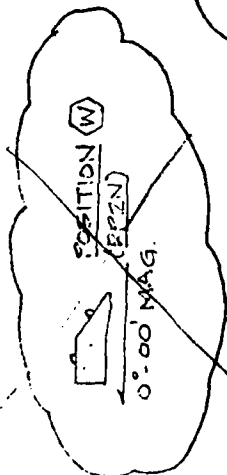
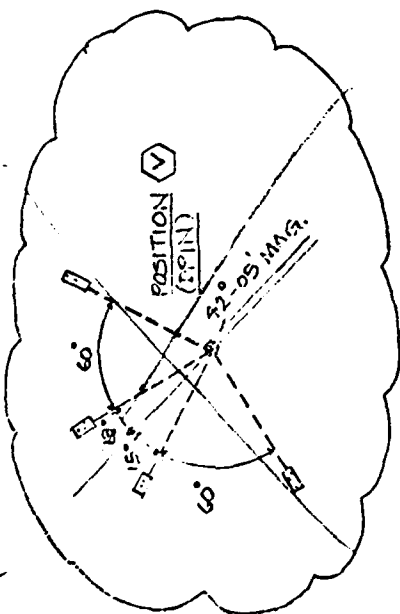
CLASS "A" MOORING AT POSITION (V) (DPIN) & (Y) (DPIS)



Notes:

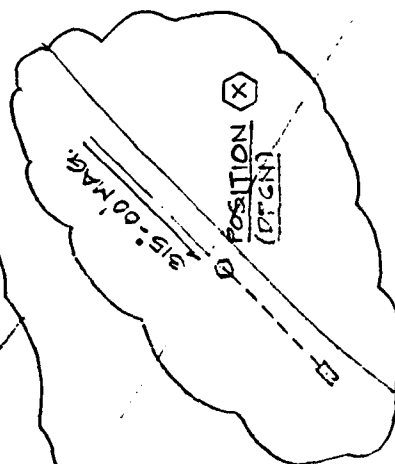
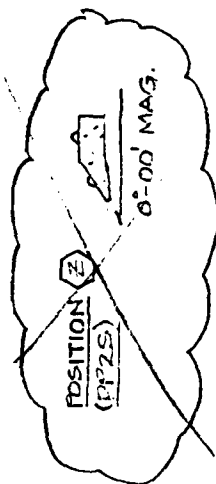
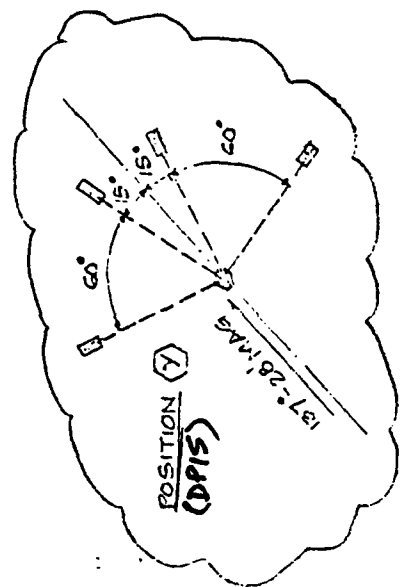
1. Components identified by (*) are existing to be re-used.
2. See Attachment G for a material list.





C-46

MOORING ANCHOR BLOCKS LAYOUT



FLEET MOORING DATA SHEET

MRG ID = DP2N GENERAL LOC = Deparming Fac. DES CLASS = C

DATE ESTAB = March 1952 DEPTH = 36.0 ft. (MLW) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-13.6" LONG. COORD. (W) = 157°-58'-35.8"

BUOY TYPE = Rubber-chain w/ hawsepole SIZE = 12' x 6' hi

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/4"

SINKER = - WT. OF SINKER = - PADEYE SIZE = -

OF ANCHORS = 1

ANCHOR 1 WT = 110,000 lb
ANCHOR 2 WT = -
ANCHOR 3 WT = -
ANCHOR 4 WT = -

PADEYE SIZE = 2 1/2"
PADEYE SIZE = -
PADEYE SIZE = -
PADEYE SIZE = -

USAGE DURING PAST YEAR = 10 days

TYPE OF SHIPS MOORED = LHA/CG/CV

DATE OF LAST REPAIR/COST = -

DATE OF LAST OVERHAUL/COST = Installation cost - \$11,000 (*)

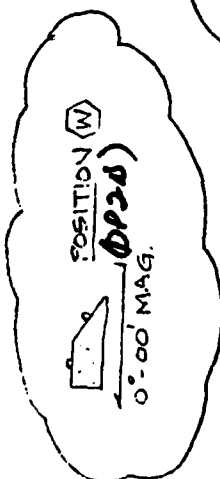
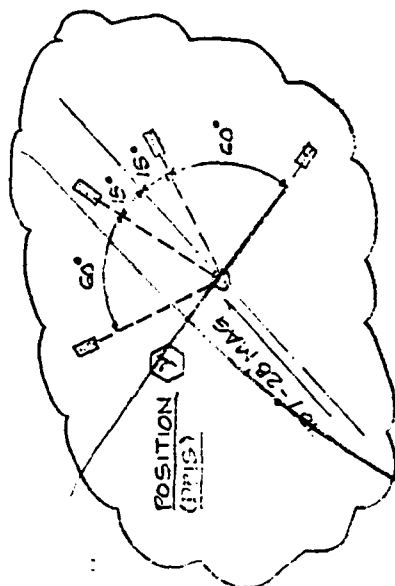
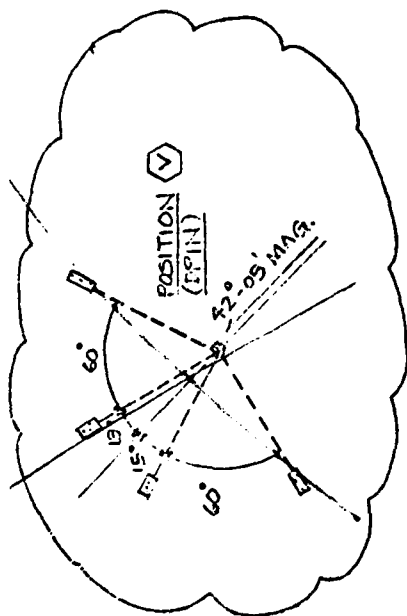
DATE OF LAST UNDERWATER INSPECTION = -
CONDUCTED BY = -

NEXT SCHED. REPAIR = 1985

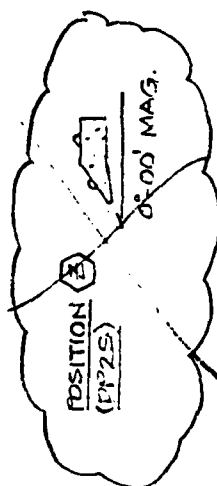
NEXT SCHED. OVERHAUL = 1987

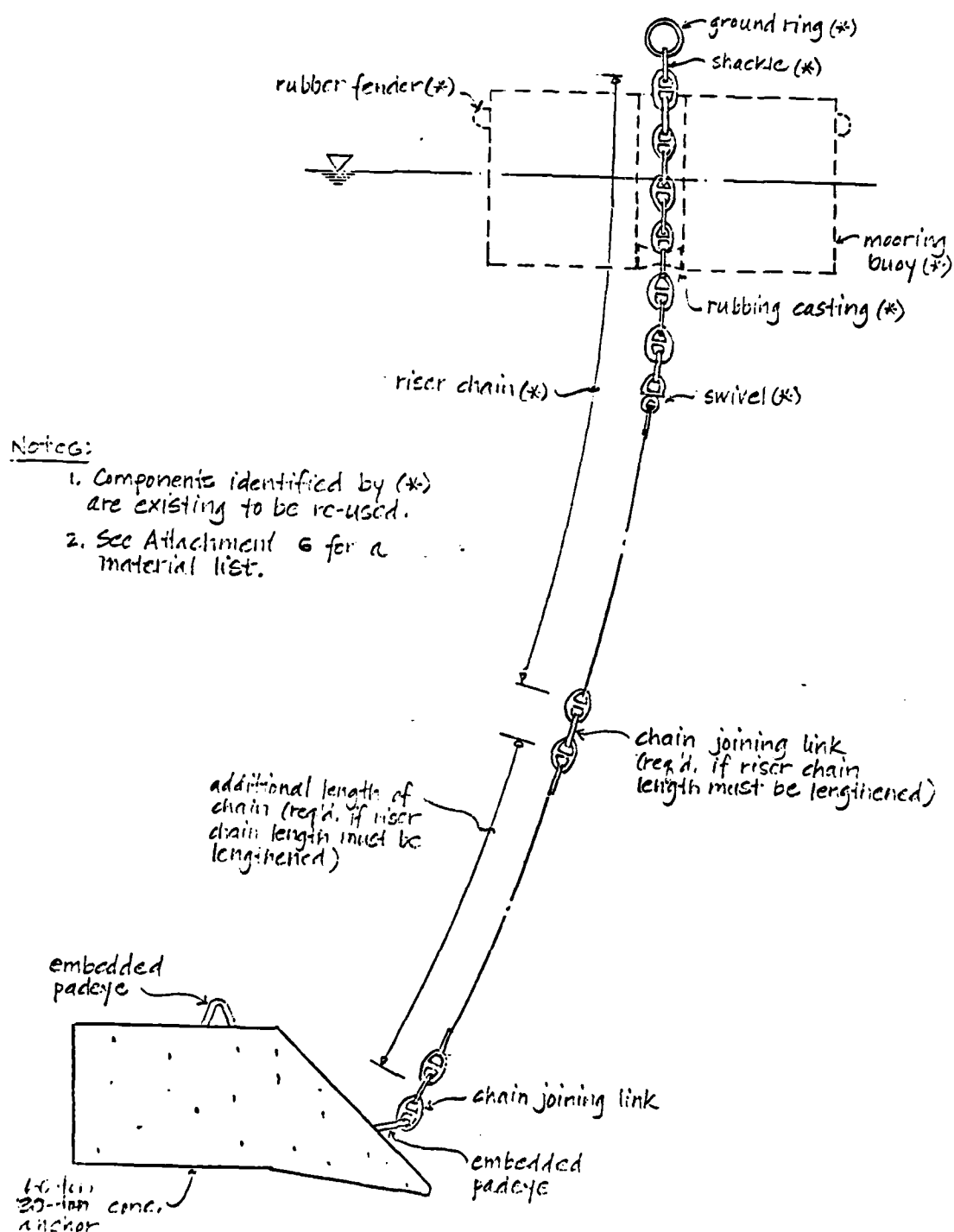
DATE SHEET COMPILED = 8-82/MS

(*) FWC J.O. 190-6626, completed 8-82: PHOENIX floating crane & diver services and FWC shop foreman; super URGENT accomplishment for LHA Deparming 4/82.



MOORING ANCHOR BLOCK LAYOUT





CLASS "C" MOORING AT POSITION (W) (DP20) E (E) (DP25)

FLEET MOORING DATA SHEET

MRG ID = DP25 GENERAL LOC = Depotting Fac. DES CLASS = C

DATE ESTAB = March 1952 DEPTH = 40.0 ft. (MLW) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-01.0" LONG. COORD. (W) = 157°-58'-38.4"

BUOY TYPE = Riser-chain w/ hawsepole SIZE = 12' x 6' hi

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/4"

SINKER = - WT. OF SINKER = - PADEYE SIZE = -

OF ANCHORS = 1

ANCHOR 1 WT = 110,000 #
ANCHOR 2 WT = -
ANCHOR 3 WT = -
ANCHOR 4 WT = -

PADEYE SIZE = 2 1/2" #
PADEYE SIZE = -
PADEYE SIZE = -
PADEYE SIZE = -

USAGE DURING PAST YEAR = 10 days

TYPE OF SHIPS MOORED = LHA/ CC/ CV

DATE OF LAST REPAIR/COST = -

DATE OF LAST OVERHAUL/COST = Installation cost = \$11,000 (K)

DATE OF LAST UNDERWATER INSPECTION = -
CONDUCTED BY = -

NEXT SCHED. REPAIR = 1965

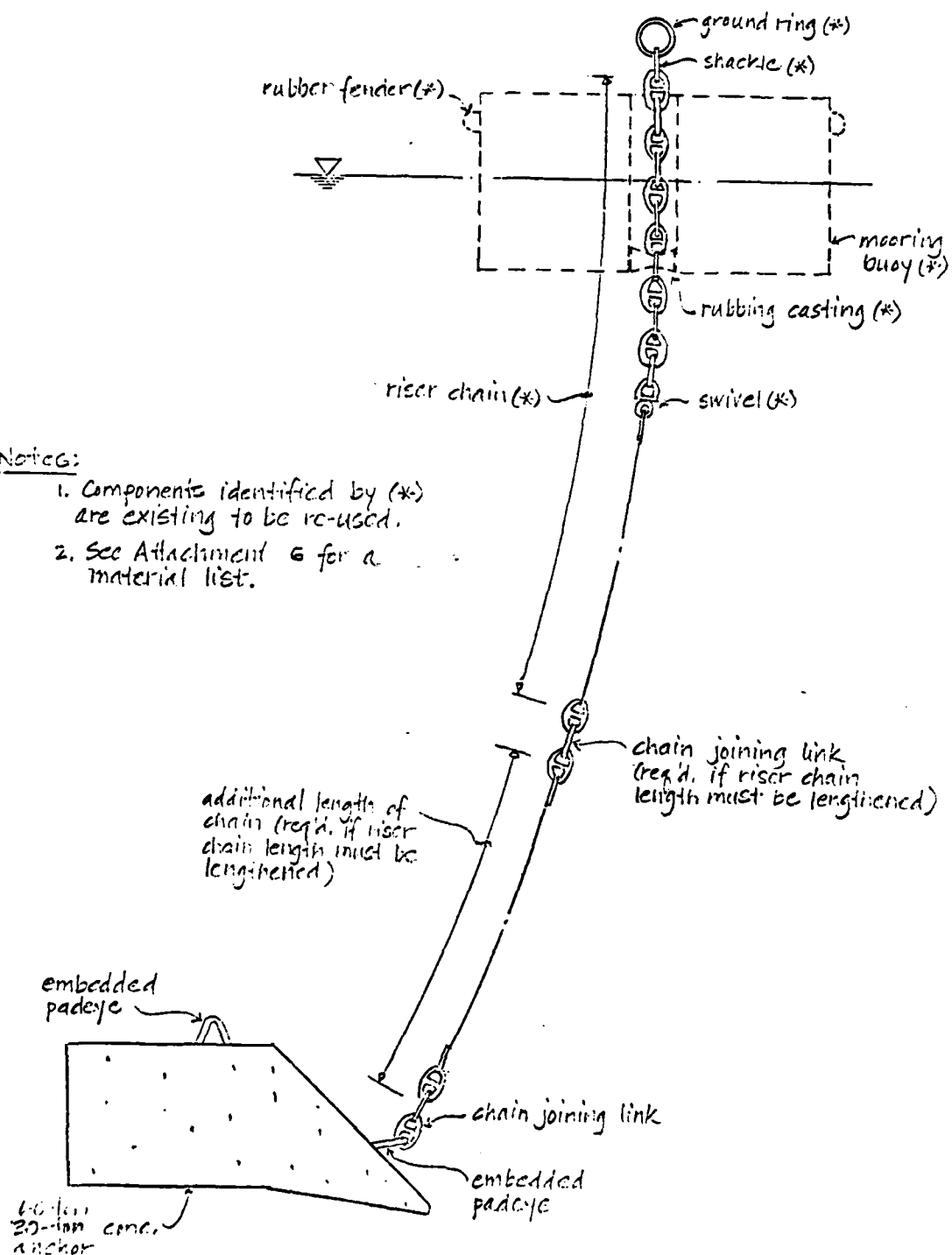
NEXT SCHED. OVERHAUL = 1967

DATE SHEET COMPILED = 8-82/MS

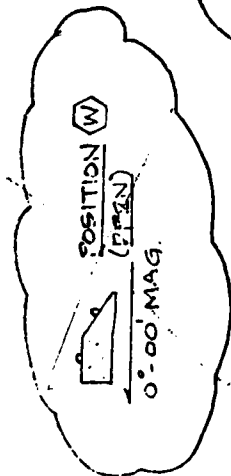
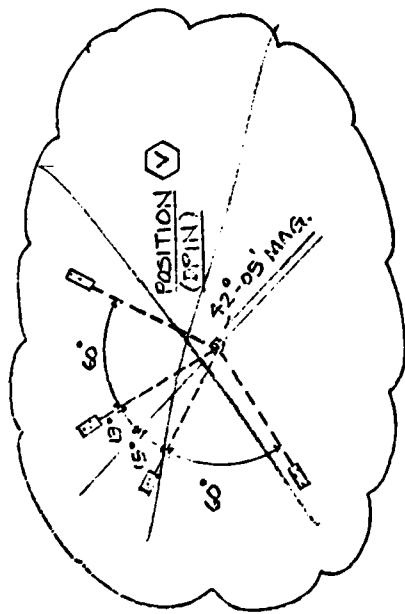
(N) FWC J.O. 170-6626, completed 3/82; FHNSY floating crane & diver services and FWC shop forces a super URGENT accomplishment for LHA depotting 4/82.

Notes:

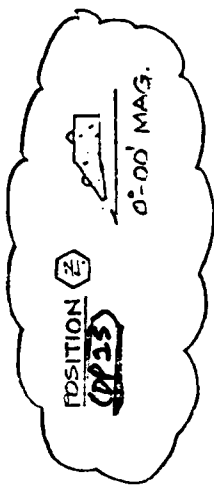
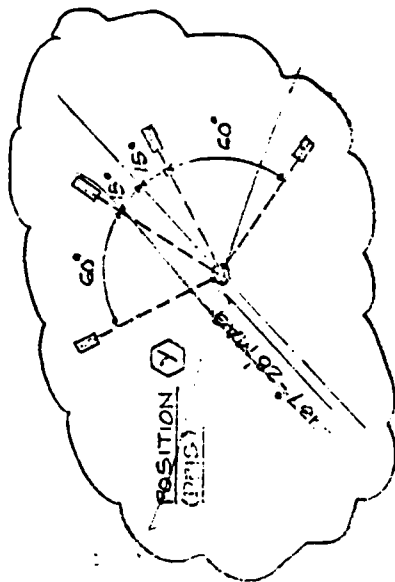
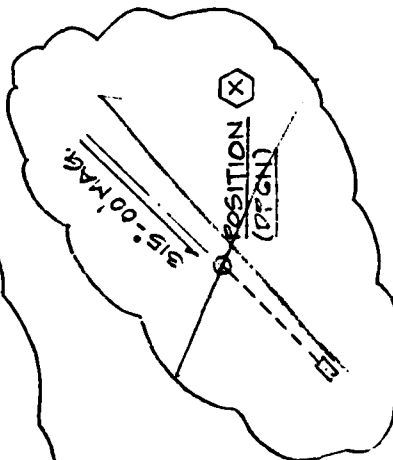
1. Components identified by (*) are existing to be re-used.
2. See Attachment G for a material list.



CLASS "C" MOORING AT POSITION (W) (DP2N) E (Z) (DP25)



MOORING ANCHOR BLOCK LAYOUT



FLEET MOORING DATA SHEET

MRG ID = DPDA GENERAL LOC = Deperming Fac. DES CLASS = C (*)

DATE ESTAB = 1948 DEPTH = 12.0 ft. (MLW) BOTTOM = Mud

LAT. COORD. (N) = 21°22'-02.9" LONG. COORD. (W) = 157°58'-39.1"

BUOY TYPE = Riser-chain w/ hawsepipe SIZE = 12'φ x 6'hi

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/4"

SINKER = - WT. OF SINKER = - PADEYE SIZE = -

OF ANCHORS = 1

ANCHOR 1 WT = 60,000 lb
ANCHOR 2 WT = -
ANCHOR 3 WT = -
ANCHOR 4 WT = -

PADEYE SIZE = 2 1/4" d
PADEYE SIZE = -
PADEYE SIZE = -
PADEYE SIZE = -

USAGE DURING PAST YEAR = 10 days

TYPE OF SHIPS MOORED = LHA/CC/CV

DATE OF LAST REPAIR/COST = 1977/ \$2,750

DATE OF LAST OVERHAUL/COST = 1-72/ ?

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESSE/ (NCT Tino)

NEXT SCHED. REPAIR = 1985

NEXT SCHED. OVERHAUL = 1987

DATE SHEET COMPILED = 6-82/MS

(*) Down-graded to class E after 1979 U/W Insp.

FLEET MOORING DATA SHEET

MRG ID = SP6N GENERAL LOC = Deperming Fac. DES CLASS = C

DATE ESTAB = 1943 DEPTH = 12.0 ft. (111W) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-12.8" LONG. COORD. (W) = 157°-58'-38.8"

BUOY TYPE = Rubber chain w/ hawse pipe SIZE = 12' x 6' hi

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/4"

SINKER = 1 (Y) WT. OF SINKER = 66,000 # PADEYE SIZE = 2 1/4" φ

OF ANCHORS = 1 (Y)

ANCHOR 1 WT = 66,000 #
ANCHOR 2 WT = —
ANCHOR 3 WT = —
ANCHOR 4 WT = —

PADEYE SIZE = 2 1/4" φ
PADEYE SIZE = —
PADEYE SIZE = —
PADEYE SIZE = —

USAGE DURING PAST YEAR = 10 days

TYPE OF SHIPS MOORED = LHA/CC/CV

DATE OF LAST REPAIR/COST = 1977 / \$4,050

DATE OF LAST OVERHAUL/COST = Installation cost = \$11,000 (**)

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESD V (UCT Two)

NEXT SCHED. REPAIR = 1985

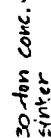
NEXT SCHED. OVERHAUL = 1987

DATE SHEET COMPILED = 6-82/MS

(*) This class C mooring has 1 sinker & 1 ground leg as directed by Deperming Facility.

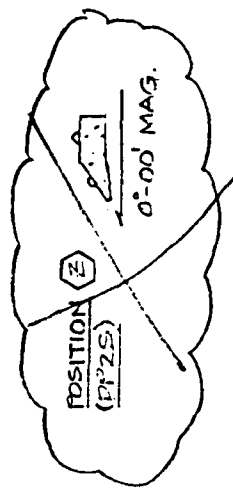
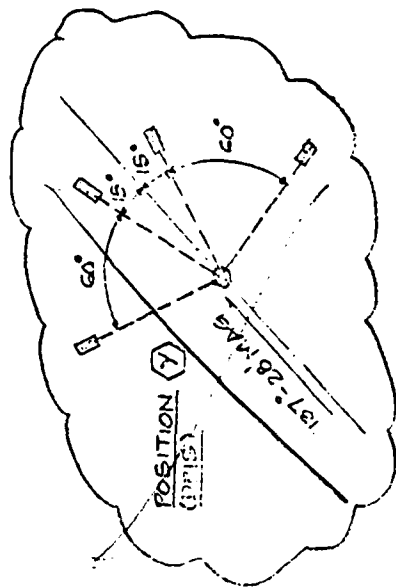
(**) FWC J.O. 170-6626, completed 3/82; PHNSY floating crane & diver services and FWC ship forces; super urgent accomplishment for LHA deperming 4/82.

Исход

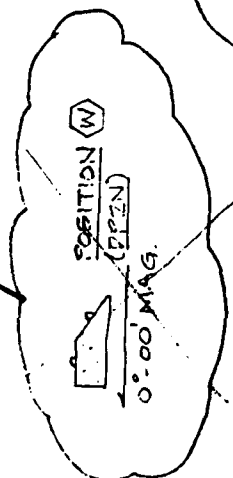
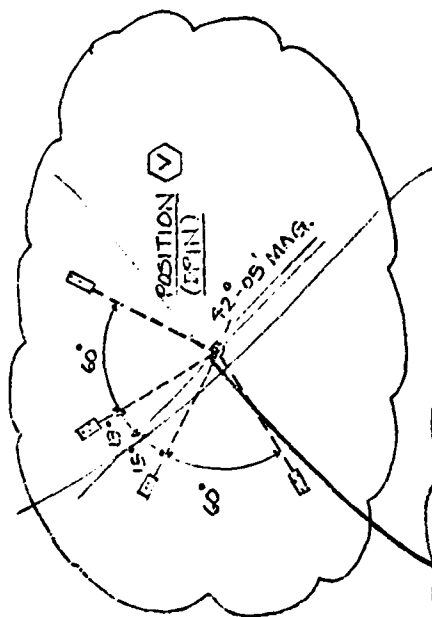


1. Components identified by (*) are existing to be re-used.
2. See Attachment G for a material list.

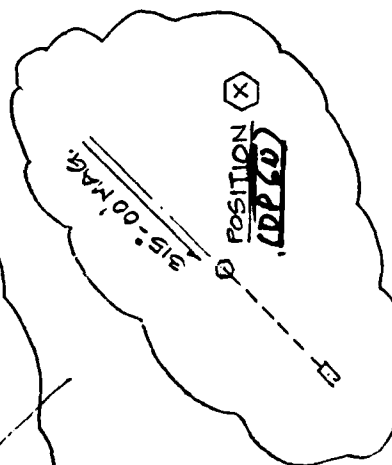
C-55



MOORING ANCHOR BLOCK LAYOUT



C-56



FLEET MOORING DATA SHEET

MRG ID = T1N GENERAL LOC = West Loch DES CLASS = C(*)

DATE ESTAB = 1957 DEPTH = 29.0 ft. (M.W.) BOTTOM = Mud

LAT. COORD. (N) = 21° 21' 13.5" LONG. COORD. (W) = 157° 58' 59.7"

BUOY TYPE = Riser-chain w/ hawse pipe SIZE = 12' ϕ x 6' hi

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 3/4"

SINKER = - WT. OF SINKER = - PADEYE SIZE = -

OF ANCHORS = 1

ANCHOR 1 WT = 60,000 #
ANCHOR 2 WT = -
ANCHOR 3 WT = -
ANCHOR 4 WT = -

PADEYE SIZE = 2 1/4" ϕ
PADEYE SIZE = -
PADEYE SIZE = -
PADEYE SIZE = -

USAGE DURING PAST YEAR = 10 days

TYPE OF SHIPS MOORED = Landing craft

DATE OF LAST REPAIR/COST = 1977 / \$2,750

DATE OF LAST OVERHAUL/COST = 1-72 / ?

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESDIN (UCT Two)

NEXT SCHED. REPAIR = 1984

NEXT SCHED. OVERHAUL = 1986

DATE SHEET COMPILED = 8-82/MS

(*) Down-graded to Class II after 1979 U/W Insp.

FLEET MOORING DATA SHEET

MRG ID = T15 GENERAL LOC = West Loch DES CLASS = C(*)

DATE ESTAB = 1957 DEPTH = 28.0 ft. (MLW) BOTTOM = Mud

LAT. COORD. (N) = 21°-22'-14.5" LONG. COORD. (W) = 157°-59'-00.7"

BUOY TYPE = Riser-chain w/ hawse pipe SIZE = 12' ϕ x 6' hi

FENDER = Rubber FIBERGLASS COATING = yes

CHAIN SIZE = 2 3/4"

SINKER = - WT. OF SINKER = - PADEYE SIZE = -

OF ANCHORS = 1

ANCHOR 1 WT = 60,000 lb
ANCHOR 2 WT = -
ANCHOR 3 WT = -
ANCHOR 4 WT = -

PADEYE SIZE = 2 1/4" ϕ
PADEYE SIZE = -
PADEYE SIZE = -
PADEYE SIZE = -

USAGE DURING PAST YEAR = 10 days

TYPE OF SHIPS MOORED = Landing craft

DATE OF LAST REPAIR/COST = 1977 / \$2,750

DATE OF LAST OVERHAUL/COST = 1-72 / ?

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESDIV (UCT Two)

NEXT SCHED. REPAIR = 1984

NEXT SCHED. OVERHAUL = 1986

DATE SHEET COMPILED = 8-82/MS

(*) Down-graded to Class G after 1979 U/W Insp.

FLEET MOORING DATA SHEET

MRG ID = X95 GENERAL LOC = East Loch DES CLASS = A ~~(*)~~

DATE ESTAB = 1940 DEPTH = ~~36.0~~^{42.0} ft. (MLW) BOTTOM = Mud

LAT. COORD. (N) = 22°-22'-48.0" LONG. COORD. (W) = 157°-57'-16.5"

BUOY TYPE = Riser-chain w/ hawsepole SIZE = 12' ϕ x 6' hi

FENDER = Rubber FIBERGLASS COATING = Yes

CHAIN SIZE = 2 ³/₄"

SINKER = 1 WT. OF SINKER = 60,000 # PADEYE SIZE = ~~2 ¹/₄" ϕ~~ 2 ³/₄" ϕ

OF ANCHORS = 4

ANCHOR 1 WT = 60,000 #
ANCHOR 2 WT = (Do.)
ANCHOR 3 WT = (Do.)
ANCHOR 4 WT = (Do.)

PADEYE SIZE = ~~2 ¹/₄" ϕ~~ 2 ³/₄" ϕ
PADEYE SIZE = (Do.)
PADEYE SIZE = (Do.)
PADEYE SIZE = (Do.)

USAGE DURING PAST YEAR = 20 days

TYPE OF SHIPS MOORED = CG/DDG/DD/FF/AO/ARS

DATE OF LAST REPAIR/COST = 1977/\$3,075

DATE OF LAST OVERHAUL/COST = ~~12-82~~ 12-82/\$51,000 (**)

DATE OF LAST UNDERWATER INSPECTION = 1979
CONDUCTED BY = CHESIV (UCT TWA)

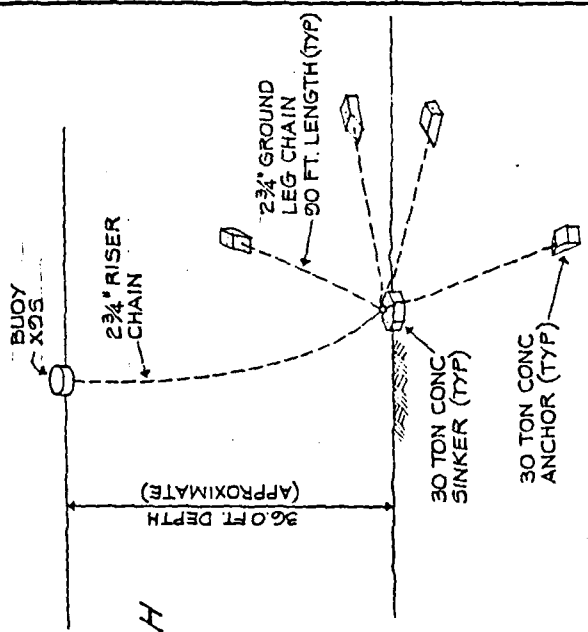
NEXT SCHED. REPAIR = 1985

NEXT SCHED. OVERHAUL = ~~1982 (over)~~

DATE SHEET COMPILED = ~~8-82~~⁴⁻⁸³/MS

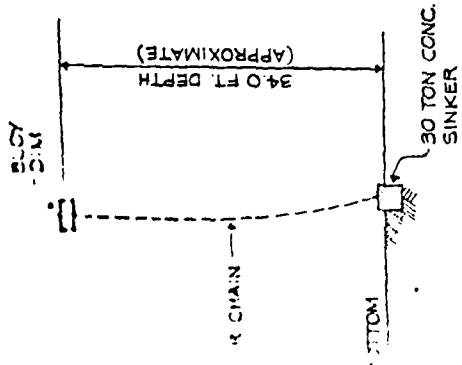
~~(*) Down graded to Class C after 1979 U/W Insp.~~

~~(**) Overhaul expected to be accomplished by Contr. N62171-B2-C-2164~~



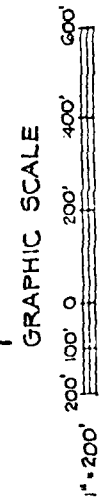
ELEVATION

EAST



PLAN

MOORING X93
NO SCALE



MOORING DIM
SCALE

DEPT OF THE NAVY		NAVAL FACILITIES ENGINEERING COMMAND	
PUBLIC WORKS CENTER		PEARL HARBOR, HAWAII	
OVERHAUL OF MOORINGS		D9N, D9M, D9S, X95 & DIM	
EXISTING MOORING BUOY PLANS & DETAILS		PEARL HARBOR	
DES	CHK	DATE	SIZE
LI SHILIAK-MIZO	LI SHILIAK-MIZO	28 Feb 64	80091
DR	DFPE		
INIT BR MGR	DEPT NO		
APPROVED	BY		
BY DIRECTION OF COMMANDING OFFICER		W R NO	
SATISFACTORY TO		7403358	
DIM DIM, EAL, EAL, EAL		CONSTR CONTR NO NG2471-82-C-2164	
TITLE		SCALE AS NOTED SPEC 14-82-2164 SHEET 2 OF 5	

END

FILMED

6-86

DTIC